

## **Raffaele SPINELLI**

Researcher

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### **EDUCATION**

**Doctorate**, 2007, Forest Engineering, National University of Ireland, University College Dublin, Ireland- Thesis: *A Decision Support System for assisting harvesting system choice in Eucalyptus spp. fast growing short rotation plantations.*

**Bachelor of Forestry** (with Honors), 1985, Tuscia University, Viterbo, Italy

### **PROFESSIONAL POSITIONS HELD**

**Adjunct Research Professor**, May 2013 – Present, University of the Sunshine Coast, Maroochydore, QLD, Australia.

**Researcher – Head of Research Section**, Jan 1995 – Present, CNR IVALSA, Sesto Fiorentino, Italy.

**Researcher**, Oct 1988 - Jan 1995, CNR IVALSA, Sesto Fiorentino, Italy.

**Research Contractor**, Jan 1985 – Oct 1988 Tuscia University, Viterbo and CNR IRL, Firenze, Italy.

### **RESEARCH ACTIVITIES**

- Harvest system planning, productivity and efficiency, including system modeling
- Mechanized harvesting in close-to-nature mountain forestry
- Mechanized harvesting of dedicated wood plantations, including SRC
- Woody biomass harvesting and transport logistics for bio-energy
- Industrial and non-industrial harvesting technologies

### **TRAINING ABROAD**

- 6 months with the Danish Forest and Landscape Institute between 1995 and 1997
- 12 months with the Biosystems Engineering Dept. at the University of California in Davis, in 2-months batches held yearly between 1998 and 2004
- 6 months with the University of Canterbury, Christchurch, New Zealand, between 2009 and 2014

### **FOREIGN LANGUAGES**

- English, Fluent – spoken and written
- French, Fluent – spoken and written
- Spanish, Fluent spoken, Good written

### **GRANTS AND SPONSORED RESEARCH**

Scientific responsible for CNR in the following EU-funded International projects:

- MA2B-CT91-0037 "*Rationalisation of harvesting operations*" (1991-93)
- AIR2-CT93-1538 "*Cost-effective Early thinnings*" (1994-96)- also WG leader
- LIFE94/F/A151/EU/00713 "*Mountain forests: techniques for long-term multi-functional management*" (1994-97)

- AIR2-CT94-0905 "Improvement of coppice forests in the mediterranean region" (1994-97)
- AIR2-CT94-1102 "Harvesting, drying and storage of energy biomass from short rotation forests" (1994-97)
- FAIR-CT98-3381 "Excavators and backhoe loaders as base machines in forest operations" (1998-2001)
- QLRT-1999-00991 "Eco-friendly timber harvesting on sensitive sites" (2000-2003)
- QLRT-1999-01493 "Small-scale wood harvesting technology in European Forestry" (2000-2003)
- QLRT-2000-00645 "Storm damaged forest : efficient and safe harvesting and log conservation methods" (2001-2004)
- NNE5-2000-00395 "Forest Energy – A solution for the Future Power Needs" (2001-2004)
- WESST "Wood Energy Supply System Training" LdV Lifelong Learning (2005-07)
- COST Action FP0902 "Forest biomass sampling and work study development" (2010-2013) – also deputy chairman
- GREENVILLAGE – LdV Lifelong Learning (2010- 2013)
- COST Action FP1301 "Eurocoppice" (2013-2016)- also deputy chairman
- E-WOOD - LdV Lifelong Learning (2013- 2015)
- FP7-KBBE.2012.1.2-01 INFRES "Innovative and effective technology and logistics for forest residual biomass supply in the EU" (2012-2015) – also WG leader
- FP7-NMP-2013-SME7 SLOPE " Integrated processing and control systems for sustainable forest production in mountain areas " (2013-2016)

Scientific responsible for CNR in many research projects sponsored by a number of Agencies in Italy.

#### **SELECTED COMMITTEES**

- Italian delegate at thr FAO/ECE/ILO Task Group "Forsitrisk" and "ForsitRisk II" (impact of forest operations), from 1990 to 2000
- Head of the Italian delegation at the European COST Action E3 "Forestry in the context of rural development" from 1994 to 1997. Within this group, chair of WG2 "Management and silvicultural options of farm forestry"
- Head of the Italian delegation at the European COST Action E31 "Management of Recovered Wood" from 2003 to 2006
- Deputy chairman of IUFRO working party P3.06-00 "Early Thinnings" from 1995 to 2000;
- Deputy chairman of IUFRO working party S6.11-02 "Forestry and Industrial Development in Industrialized Countries";
- Member of the Italian Agricultural Engineering Association (AIIA)
- Member of the Italian Society of Forestry and Forest Ecology (SISEF)
- Member of the Scientific Committee of the Italian Biomass Association (ITABIA), Rome
- Member of the Scientific Committee of the Institut Technique Europeen du Bois Energie, Lons-le-Saunier (France)

#### **EDITORIAL BOARDS**

- Member of the Editorial Board of the technical magazine "Alberi e Territorio" – Il Sole 24 ore, Bologna (until 2010, when the journal closed)

- Member of the Editorial Board of the International journal “Croatian Journal of Forest Engineering”
- Member of the Editorial Board of the International journal “International Journal of Forest Engineering”
- Member of the Editorial Board of the International journal “Annals of Forest Research”
- Member of the Editorial Board of the International journal “Biomass and Bioenergy”
- Associate Editor of the International Journal “Small Scale Forestry”
- Member of the Editorial Board of the International journal “Current Forestry Reports”
- Member of the Editorial Board of the International journal “Hungarian Journal of Agricultural Engineering”

#### **TEACHING AND SUPERVISING ACTIVITIES**

- Teaching for the Master courses organized by the Universities of Padua (2003), Florence (2005 and 2007), Pisa (2008) and Milan (2013 and 2014)
- Hosted two international scholars (faculty on sabbatical)
- Hosted undergraduate students within the scope of International exchange with France (6), Germany (4) and Brazil (3)
- Lectures for Canterbury University in Christchurch, within the scope of a Jack Erskine Fellowship in 2009, 2011 and 2014
- Lectured at the State University of San Paolo, Brazil – Campus in Botucatu in 2010, 2011 and 2012
- Lectured at the Estonian University of Applied Sciences in Tartu in 2014

#### *Staff and Facilities*

- Supervises a total staff of 5 researchers

#### **SELECTED PUBLICATIONS – INTERNATIONAL, PEER-REVIEWED**

Spinelli, R., Cavallo, E., Eliasson, L., Facello, A., Magagnotti, N.  
The effect of drum design on chipper performance  
(2015) *Renewable Energy*, 81, pp. 57-61.

Civitaresse, V., Spinelli, R., Barontini, M., Gallucci, F., Santangelo, E., Acampora, A., Scarfone, A., Del Giudice, A., Pari, L.  
Open-Air Drying of Cut and Windrowed Short-Rotation Poplar Stems  
(2015) *Bioenergy Research*, 7 p. Article in Press.

Nati, C., Magagnotti, N., Spinelli, R.  
The improvement of hog fuel by removing fines, using a trommel screen  
(2015) *Biomass and Bioenergy*, 75, pp. 155-160.

Spinelli, R., Magagnotti, N., Pari, L., De Francesco, F.  
A comparison of tractor-trailer units and high-speed forwarders used in Alpine forestry  
(2015) *Scandinavian Journal of Forest Research*, 8 p. Article in Press.

Schweier, J., Spinelli, R., Magagnotti, N., Becker, G.  
Mechanized coppice harvesting with new small-scale feller-bunchers: Results from harvesting trials with newly manufactured felling heads in Italy  
(2015) *Biomass and Bioenergy*, 72, pp. 85-94.

Eliasson, L., von Hofsten, H., Johannesson, T., Spinelli, R., Thierfelder, T.

Effects of sieve size on chipper productivity, fuel consumption and chip size distribution for open drum chippers

(2015) *Croatian Journal of Forest Engineering*, 36 (1), pp. 11-18.

Di Gironimo, G., Balsamo, A., Esposito, G., Lanzotti, A., Melemez, K., Spinelli, R.

Simulation of forest harvesting alternative processes and concept design of an innovative skidding winch focused on productivity improvement

(2015) *Turkish Journal of Agriculture and Forestry*, 39 (2), pp. 350-359.

Valente, C., Spinelli, R., Hillring, B.G., Solberg, B.

Mountain forest wood fuel supply chains: Comparative studies between Norway and Italy

(2014) *Biomass and Bioenergy*, 71, pp. 370-380.

Guerra, S.P.S., Garcia, E.A., Lanças, K.P., Rezende, M.A., Spinelli, R.

Heating value of eucalypt wood grown on SRC for energy production

(2014) *Fuel*, 137, pp. 360-363.

Spinelli, R., Aalmo, G.O., Magagnotti, N.

The effect of a slack-pulling device in reducing operator physiological workload during log winching operations

(2014) *Ergonomics*, 10 p. Article in Press.

Manzone, M., Spinelli, R.

Efficiency of small-scale firewood processing operations in Southern Europe

(2014) *Fuel Processing Technology*, 122, pp. 58-63.

Spinelli, R., Ebone, A., Gianella, M.

Biomass production from traditional coppice management in northern Italy

(2014) *Biomass and Bioenergy*, 62, pp. 68-73.

Magagnotti, N., Picchi, G., Sciarra, G., Spinelli, R.

Exposure of mobile chipper operators to diesel exhaust

(2014) *Annals of Occupational Hygiene*, 58 (2), pp. 217-226.

Barontini, M., Scarfone, A., Spinelli, R., Gallucci, F., Santangelo, E., Acampora, A., Jirjis, R., Civitarese, V., Pari, L.

Storage dynamics and fuel quality of poplar chips

(2014) *Biomass and Bioenergy*, 62, pp. 17-25.

Spinelli, R., Glushkov, S., Markov, I.

Managing chipper knife wear to increase chip quality and reduce chipping cost

(2014) *Biomass and Bioenergy*, 62, pp. 117-122.

Spinelli, R., Lombardini, C., Magagnotti, N.

The effect of mechanization level and harvesting system on the thinning cost of Mediterranean softwood plantations

(2014) *Silva Fennica*, 48 (1), art. no. 1003

Spinelli, R., Lombardini, C., Pari, L., Sadauskiene, L.

An alternative to field burning of pruning residues in mountain vineyards

(2014) *Ecological Engineering*, 70, pp. 212-216.

Lombardini, C., Magagnotti, N., Spinelli, R.

Productivity and cost of industrial firewood processing operations

(2014) *Forest Products Journal*, 64 (5-6), pp. 171-178.

Spinelli, R., Magagnotti, N., Di Fulvio, F., Bergström, D., Danelon, M., Alberti, G.

Comparison of cost efficiency of mechanized fuel wood thinning systems for hardwood plantations on farmland

(2014) *Croatian Journal of Forest Engineering*, 35 (2), pp. 111-123.

Kleibl, M., Klvač, R., Lombardini, C., Porhaly, J., Spinelli, R.

Soil compaction and recovery after mechanized final felling of Italian coastal pine plantations

(2014) *Croatian Journal of Forest Engineering*, 35 (1), pp. 63-71.

Spinelli, R., Brown, M., Giles, R., Huxtable, D., Relano, R.L., Magagnotti, N.  
Harvesting alternatives for mallee agroforestry plantations in Western Australia  
(2014) *Agroforestry Systems*, 88 (3), pp. 479-487.

Spinelli, R., Magagnotti, N.  
Determining long-term chipper usage, productivity and fuel consumption  
(2014) *Biomass and Bioenergy*, 66, pp. 442-449.

Nati, C., Eliasson, L., Spinelli, R.  
Effect of chipper type, biomass type and blade wear on productivity, fuel consumption and product quality  
(2014) *Croatian Journal of Forest Engineering*, 35 (1), pp. 1-7.

Visser, R., Berkett, H., Spinelli, R.  
Determining the effect of storage conditions on the natural drying of radiata pine logs for energy use  
(2014) *New Zealand Journal of Forestry Science*, 44, pp. 1-8.

Marchi, E., Picchio, R., Spinelli, R., Verani, S., Venanzi, R., Certini, G.  
Environmental impact assessment of different logging methods in pine forests thinning  
(2014) *Ecological Engineering*, 70, pp. 429-436.

Spinelli, R., Di Gironimo, G., Esposito, G., Magagnotti, N.  
Alternative supply chains for logging residues under access constraints  
(2014) *Scandinavian Journal of Forest Research*, 29 (3), pp. 266-274.

Spinelli, R., Magagnotti, N.  
Using disposable chipper knives to decrease wood fuel processing cost  
(2014) *Fuel Processing Technology*, 126, pp. 415-419.

Calvo, A., Manzone, M., Spinelli, R.  
Long term repair and maintenance cost of some professional chainsaws  
(2013) *Croatian Journal of Forest Engineering*, 34 (2), pp. 265-272.

Ghaffariyan, M.R., Brown, M., Spinelli, R.  
Evaluating efficiency, chip quality and harvesting residues of a chipping operation with flail and chipper in Western Australia  
(2013) *Croatian Journal of Forest Engineering*, 34 (2), pp. 189-199.

Facello, A., Cavallo, E., Magagnotti, N., Paletto, G., Spinelli, R.  
The effect of knife wear on chip quality and processing cost of chestnut and locust fuel wood  
(2013) *Biomass and Bioenergy*, 59, pp. 468-476.

Spinelli, R., Magagnotti, N.  
The effect of harvest tree distribution on harvesting productivity in selection cuts  
(2013) *Scandinavian Journal of Forest Research*, 28 (7), pp. 701-709.

Assirelli, A., Santangelo, E., Spinelli, R., Acampora, A., Croce, S., Civitarese, V., Pari, L.  
Mechanization of rhizome extraction in giant reed (*arundo donax* L.) nurseries  
(2013) *Applied Engineering in Agriculture*, 29 (4), pp. 489-494.

Ghaffariyan, M.R., Spinelli, R., Brown, M.  
A model to predict productivity of different chipping operations  
(2013) *Southern Forests*, 75 (3), pp. 129-136.

Spinelli, R., Magagnotti, N.  
Performance of a small-scale chipper for professional rural contractors  
(2013) *Forest Science and Practice*, 15 (3), pp. 206-213.

Facello, A., Cavallo, E., Magagnotti, N., Paletto, G., Spinelli, R.  
The effect of chipper cut length on wood fuel processing performance

(2013) *Fuel Processing Technology*, 116, pp. 228-233.

Spinelli, R., Cavallo, E., Eliasson, L., Facello, A.  
Comparing the efficiency of drum and disc chippers  
(2013) *Silva Fennica*, 47 (2), .

Manzone, M., Spinelli, R.  
Wood chipping performance of a modified forager  
(2013) *Biomass and Bioenergy*, 55, pp. 101-106.

Magagnotti, N., Picchi, G., Spinelli, R.  
A versatile machine system for salvaging small-scale forest windthrow  
(2013) *Biosystems Engineering*, 115 (4), pp. 381-388.

Facello, A., Cavallo, E., Magagnotti, N., Paletto, G., Spinelli, R.  
The effect of knife wear on chip quality and processing cost of chestnut and locust fuel wood  
(2013) *Biomass and Bioenergy*, . Article in Press.

Magagnotti, N., Nannicini, C., Sciarra, G., Spinelli, R., Volpi, D.  
Determining the exposure of chipper operators to inhalable wood dust  
(2013) *Annals of Occupational Hygiene*, 57 (6), pp. 784-792.

Assirelli, A., Civitarese, V., Fanigliulo, R., Pari, L., Pochi, D., Santangelo, E., Spinelli, R.  
Effect of piece size and tree part on chipper performance  
(2013) *Biomass and Bioenergy*, 54, pp. 77-82.

Acampora, A., Croce, S., Assirelli, A., Del Giudice, A., Spinelli, R., Suardi, A., Pari, L.  
Product contamination and harvesting losses from mechanized recovery of olive tree pruning residues for energy use  
(2013) *Renewable Energy*, 53, pp. 350-353.

Spinelli, R., Lombardini, C., Magagnotti, N.  
Salvaging windthrown trees with animal and machine systems in protected areas  
(2013) *Ecological Engineering*, 53, pp. 61-67. Cited 1 time.

Pari, L., Civitarese, V., Giudice, A.D., Assirelli, A., Spinelli, R., Santangelo, E.  
Influence of chipping device and storage method on the quality of SRC poplar biomass  
(2013) *Biomass and Bioenergy*, 51, pp. 169-176.

Manzone, M., Balsari, P., Spinelli, R.  
Small-scale storage techniques for fuel chips from short rotation forestry  
(2013) *Fuel*, 109, pp. 687-692.

Pari, L., Civitarese, V., Giudice, A.d., Assirelli, A., Spinelli, R., Santangelo, E.  
Influence of chipping device and storage method on the quality of SRC poplar biomass  
(2013) *Biomass and Bioenergy*, . Article in Press.

Magagnotti, N., Pari, L., Picchi, G., Spinelli, R.  
Technology alternatives for tapping the pruning residue resource  
(2013) *Bioresource Technology*, 128, pp. 697-702.

Spinelli, R., Magagnotti, N.  
The effect of raw material, cut length, and chip discharge on the performance of an industrial chipper  
(2012) *Forest Products Journal*, 62 (7-8), art. no. 12-00083, pp. 584-589.

Zambelli, P., Lora, C., Spinelli, R., Tattoni, C., Vitti, A., Zatelli, P., Ciolli, M.  
A GIS decision support system for regional forest management to assess biomass availability for renewable energy production  
(2012) *Environmental Modelling and Software*, 38, pp. 203-213.

Magagnotti, N., Pari, L., Picchi, G., Spinelli, R.

- Energy biomass from the low-investment fully mechanized thinning of hardwood plantations  
(2012) *Biomass and Bioenergy*, 47, pp. 195-200.
- Ferrari, E., Spinelli, R., Cavallo, E., Magagnotti, N.  
Attitudes towards mechanized Cut-to-Length technology among logging contractors in Northern Italy  
(2012) *Scandinavian Journal of Forest Research*, 27 (8), pp. 800-806.
- Spinelli, R., Schweier, J., De Francesco, F.  
Harvesting techniques for non-industrial biomass plantations  
(2012) *Biosystems Engineering*, 113 (4), pp. 319-324.
- Magagnotti, N., Spinelli, R., Güldner, O., Erler, J.  
Site impact after motor-manual and mechanised thinning in Mediterranean pine plantations  
(2012) *Biosystems Engineering*, 113 (2), pp. 140-147.
- Picchio, R., Magagnotti, N., Sirna, A., Spinelli, R.  
Improved winching technique to reduce logging damage  
(2012) *Ecological Engineering*, 47, pp. 83-86.
- Visser, R., Spinelli, R.  
Determining the shape of the productivity function for mechanized felling and felling-processing  
(2012) *Journal of Forest Research*, 17 (5), pp. 397-402.  
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- Spinelli, R., Magagnotti, N., Laina Relañó, R.  
An alternative skidding technology to the current use of crawler tractors in Alpine logging operations  
(2012) *Journal of Cleaner Production*, 31, pp. 73-79. Cited
- Spinelli, R., Cavallo, E., Facello, A.  
A new comminution device for high-quality chip production  
(2012) *Fuel Processing Technology*, 99, pp. 69-74. Cited 4 times.
- Magagnotti, N., Spinelli, R.  
Replacing Steel Cable with Synthetic Rope to Reduce Operator Workload During Log Winching Operations  
(2012) *Small-scale Forestry*, 11 (2), pp. 223-236.
- Spinelli, R., Cavallo, E., Facello, A., Magagnotti, N., Nati, C., Paletto, G.  
Performance and energy efficiency of alternative comminution principles: Chipping versus grinding  
(2012) *Scandinavian Journal of Forest Research*, 27 (4), pp. 393-400. Cited 3 times.
- Suchomel, C., Spinelli, R., Magagnotti, N.  
Productivity of processing hardwood from coppice forests [Proizvodnost strojne izradbe tvrdih listača iz panjača]  
(2012) *Croatian Journal of Forest Engineering*, 33 (1), pp. 39-47. Cited 1 time.
- Costa, C., Menesatti, P., Spinelli, R.  
Performance modelling in forest operations through partial least square regression  
(2012) *Silva Fennica*, 46 (2), pp. 241-252.
- Spinelli, R., Lombardini, C., Magagnotti, N.  
Annual usage and long-term productivity of a truck-mounted slash bundler under mountain conditions  
(2012) *European Journal of Forest Research*, 131 (3), pp. 821-827.
- Spinelli, R., Magagnotti, N.  
Wood Extraction with Farm Tractor and Sulky: Estimating Productivity, Cost and Energy Consumption  
(2012) *Small-scale Forestry*, 11 (1), pp. 73-85. Cited 4 times.
- Mercurio, R., Spinelli, R.  
Exploring the silvicultural and economic viability of gap cutting in Mediterranean softwood plantations  
(2012) *Forestry Studies in China*, 14 (1), pp. 63-69.

- Spinelli, R., Magagnotti, N., Picchi, G.  
A supply chain evaluation of slash bundling under the conditions of mountain forestry  
(2012) *Biomass and Bioenergy*, 36, pp. 339-345.
- Magagnotti, N., Pari, L., Spinelli, R.  
Re-engineering firewood extraction in traditional Mediterranean coppice stands  
(2012) *Ecological Engineering*, 38 (1), pp. 45-50. Cited 4 times.
- Spinelli, R., Magagnotti, N., Nati, C., Pari, L., Vanneste, J.L.  
Recovering kiwifruit pruning residues for biomass production  
(2012) *Transactions of the ASABE*, 55 (1), pp. 21-28.
- Spinelli, R., Nati, C., Pari, L., Mescalchin, E., Magagnotti, N.  
Production and quality of biomass fuels from mechanized collection and processing of vineyard pruning residues  
(2012) *Applied Energy*, 89 (1), pp. 374-379.
- Magagnotti, N., Nati, C., Pari, L., Spinelli, R., Visser, R.  
Assessing the cost of stump-site debarking in eucalypt plantations  
(2011) *Biosystems Engineering*, 110 (4), pp. 443-449.
- Magagnotti, N., Spinelli, R.  
Integrating animal and mechanical operations in protected areas [Povezivanje animalnoga i strojnoga rada u zaštićenim područjima]  
(2011) *Croatian Journal of Forest Engineering*, 32 (2), pp. 489-499.
- Marchi, E., Magagnotti, N., Berretti, L., Neri, F., Spinelli, R.  
Comparing terrain and roadside chipping in mediterranean pine salvage cuts [Usporedba iveranja u sastojini i na pomoćnom stovarištu pri sanitarnoj sječi primorskoga bora]  
(2011) *Croatian Journal of Forest Engineering*, 32 (2), pp. 587-598.
- Spinelli, R., Magagnotti, N., Picchi, G.  
Annual use, economic life and residual value of cut-to-length harvesting machines  
(2011) *Journal of Forest Economics*, 17 (4), pp. 378-387. Cited 2 times.
- Valente, C., Spinelli, R., Hillring, B.G.  
LCA of environmental and socio-economic impacts related to wood energy production in alpine conditions: Valle di Fiemme (Italy)  
(2011) *Journal of Cleaner Production*, 19 (17-18), pp. 1931-1938.
- Spinelli, R., Magagnotti, N.  
The effects of introducing modern technology on the financial, labour and energy performance of forest operations in the Italian Alps  
(2011) *Forest Policy and Economics*, 13 (7), pp. 520-524. Cited 9 times.
- Spinelli, R., Magagnotti, N., Nati, C.  
Work quality and veneer value recovery of mechanised and manual log-making in Italian poplar plantations  
(2011) *European Journal of Forest Research*, 130 (5), pp. 737-744.
- Spinelli, R., Magagnotti, N.  
Strategies for the processing of tree tops from hybrid poplar plantations [(Russian Source)]  
(2011) *Baltic Forestry*, 17 (1), pp. 50-57. Cited 1 time.  
<http://www.scopus.com/inward/record.url?eid=2-s2.0->
- Spinelli, R., Magagnotti, N., Picchi, G., Lombardini, C., Nati, C.  
Upsized harvesting technology for coping with the new trends in short-rotation coppice  
(2011) *Applied Engineering in Agriculture*, 27 (4), pp. 551-557.
- Spinelli, R., Ivorra, L., Magagnotti, N., Picchi, G.  
Performance of a mobile mechanical screen to improve the commercial quality of wood chips for energy



(2011) *Bioresource Technology*, 102 (15), pp. 7366-7370.

Spinelli, R., Magagnotti, N., Sperandio, G., Cielo, P., Verani, S., Zanuttini, R.  
Cost and productivity of harvesting high-value hybrid poplar plantations in Italy  
(2011) *Forest Products Journal*, 61 (1), pp. 64-70.

Spinelli, R., Nati, C., Sozzi, L., Magagnotti, N., Picchi, G.  
Physical characterization of commercial woodchips on the Italian energy market  
(2011) *Fuel*, 90 (6), pp. 2198-2202. Cited 13 times.

Spinelli, R., Magagnotti, N., Paletto, G., Preti, C.  
Determining the impact of some wood characteristics on the performance of a mobile chipper  
(2011) *Silva Fennica*, 45 (1), pp. 85-95.

Magagnotti, N., Nati, C., Picchi, G., Spinelli, R.  
Mechanized thinning of walnut plantations established on ex-arable land  
(2011) *Agroforestry Systems*, 82 (1), pp. 77-86.

Magagnotti, N., Spinelli, R.  
Financial and energy cost of low-impact wood extraction in environmentally sensitive areas  
(2011) *Ecological Engineering*, 37 (4), pp. 601-606. Cited 9 times.

Spinelli, R., Magagnotti, N., Nati, C., Cantini, C., Sani, G., Picchi, G., Biocca, M.  
Integrating olive grove maintenance and energy biomass recovery with a single-pass pruning and harvesting machine  
(2011) *Biomass and Bioenergy*, 35 (2), pp. 808-813. Cited 2 times.

Spinelli, R., Magagnotti, N.  
Performance and cost of a new mini-forwarder for use in thinning operations  
(2010) *Journal of Forest Research*, 15 (6), pp. 358-364.

Spinelli, R., Magagnotti, N., Nati, C.  
Benchmarking the impact of traditional small-scale logging systems used in Mediterranean forestry  
(2010) *Forest Ecology and Management*, 260 (11), pp. 1997-2001.

Montorselli, N.B., Lombardin, C., Magagnotti, N., Marchi, E., Neri, F., Picchi, G., Spinelli, R.  
Relating safety, productivity and company type for motor-manual logging operations in the Italian Alps  
(2010) *Accident Analysis and Prevention*, 42 (6), pp. 2013-2017.

Nati, C., Spinelli, R., Fabbri, P.  
Wood chips size distribution in relation to blade wear and screen use  
(2010) *Biomass and Bioenergy*, 34 (5), pp. 583-587.

Spinelli, R., Hartsough, B.R., Magagnotti, N.  
Productivity standards for harvesters and processors in Italy  
(2010) *Forest Products Journal*, 60 (3), pp. 226-235.

Spinelli, R., Magagnotti, N.  
A tool for productivity and cost forecasting of decentralised wood chipping  
(2010) *Forest Policy and Economics*, 12 (3), pp. 194-198.

Spinelli, R., Magagnotti, N., Nati, C.  
Harvesting vineyard pruning residues for energy use  
(2010) *Biosystems Engineering*, 105 (3), pp. 316-322.

Spinelli, R., Magagnotti, N.  
Comparison of two harvesting systems for the production of forest biomass from the thinning of *Picea abies* plantations  
(2010) *Scandinavian Journal of Forest Research*, 25 (1), pp. 69-77.

- Spinelli, R., Magagnotti, N., Lombardini, C.  
Performance, capability and costs of small-scale cable yarding technology  
(2010) *Small-scale Forestry*, 9 (1), pp. 123-135.
- Spinelli, R., Picchi, G.  
Industrial harvesting of olive tree pruning residue for energy biomass  
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### **Main metrics**

Scopus H = 19  
Publications listed on Scopus = 115  
Scopus citations = 950  
Scopus co-Authors = 118

Google Scholar H = 20  
Google Scholar i-10 Index = 57  
Google Scholar citations = 1839

Research Gate Impact points = 211.37  
Research Gate G score = 36.34  
Research Gate publications = 143  
Research Gate citations = 750  
Research Gate downloads = 1660

Research Gate views = 8k