

# Contents

1	<b>Optimal Planning of Pig Transfers Along a Pig Supply Chain . . . . .</b>	1
	Esteve Nadal-Roig and Lluís M. Plà-Aragonés	
2	<b>Planning the Planting, Harvest, and Distribution of Fresh Horticultural Products . . . . .</b>	19
	Nicholas Mason, Héctor Flores, J. René Villalobos, and Omar Ahumada	
3	<b>Production and Logistics Planning in Seed Corn . . . . .</b>	55
	Rogerio A.R. Junqueira and Reinaldo Morabito	
4	<b>Harvest Planning in Apple Orchards Using an Optimization Model . . . . .</b>	79
	Marcela C. González-Araya, Wladimir E. Soto-Silva, and Luis G. Acosta Espejo	
5	<b>Optimization of the Supply Chain Management of Sugarcane in Cuba . . . . .</b>	107
	Esteban López-Milán and Lluís M. Plà-Aragonés	
6	<b>A Hierarchical Planning Scheme Based on Precision Agriculture . . . . .</b>	129
	Víctor M. Albornoza, Néstor M. Cid-García, Rodrigo Ortega, and Yasmín A. Ríos-Solís	
7	<b>Optimal Transport Planning for the Supply to a Fruit Logistic Centre . . . . .</b>	163
	Esteve Nadal-Roig and Lluís M. Plà-Aragonés	
8	<b>Simulating Vulnerability in Victoria's Fruit and Vegetable Supply Chain . . . . .</b>	179
	Leorey Marquez, Andrew Higgins, and Silvia Estrada-Flores	

<b>9</b>	<b>Simulation Optimization: Applications in Fish Farming—Theory vs. Practices . . . . .</b>	201
	Ilan Halachmi	
<b>10</b>	<b>Swarm Intelligence in Optimal Management of Aquaculture Farms . . . . .</b>	221
	A. Cobo, I. Llorente, and L. Luna	
<b>11</b>	<b>Multi-objective Optimization for Improved Agricultural Water and Nitrogen Management in Selected Regions of Africa . . . . .</b>	241
	M. Pastori, A. Udías, F. Bouraoui, A. Aloe, and G. Bidoglio	
<b>12</b>	<b>Modelling of Catastrophic Farm Risks Using Sparse Data . . . . .</b>	259
	V.A. Ogurtsov, M.A.P.M. van Asseldonk, and R.B.M. Huirne	
<b>13</b>	<b>Forecasting Grape Maturation Under Heat Stress Using MatPred . . . . .</b>	277
	Leorey Marquez, Geoff Robinson, and Simon Dunstall	
<b>14</b>	<b>Technical Efficiency of Sow Farms: A Parametric and Non-parametric Approach . . . . .</b>	307
	Xavier Ezcurra and Lluís M. Plà-Aragonés	
<b>15</b>	<b>Multicriteria Analysis of Olive Farms Sustainability: An Application of TOPSIS Models . . . . .</b>	327
	Laura Riesgo and Jordi Gallego-Ayala	
<b>16</b>	<b>On the Feasibility of Establishing a Northern-Western Australian Beef Abattoir as a Facility Location Problem . . . . .</b>	355
	Rodolfo García-Flores and Andrew Higgins	
<b>17</b>	<b>Optimal Delivery of Pigs to the Abattoir . . . . .</b>	381
	Lluís M. Plà-Aragonés and Sara V. Rodríguez-Sánchez	
<b>18</b>	<b>Diet Problems . . . . .</b>	397
	E. Joannopoulos, F. Dubeau, J.-P. Dussault, and C. Pomar	
<b>19</b>	<b>Markov Decision Processes to Model Livestock Systems . . . . .</b>	419
	Lars Relund Nielsen and Anders Ringgaard Kristensen	
<b>Index . . . . .</b>		455