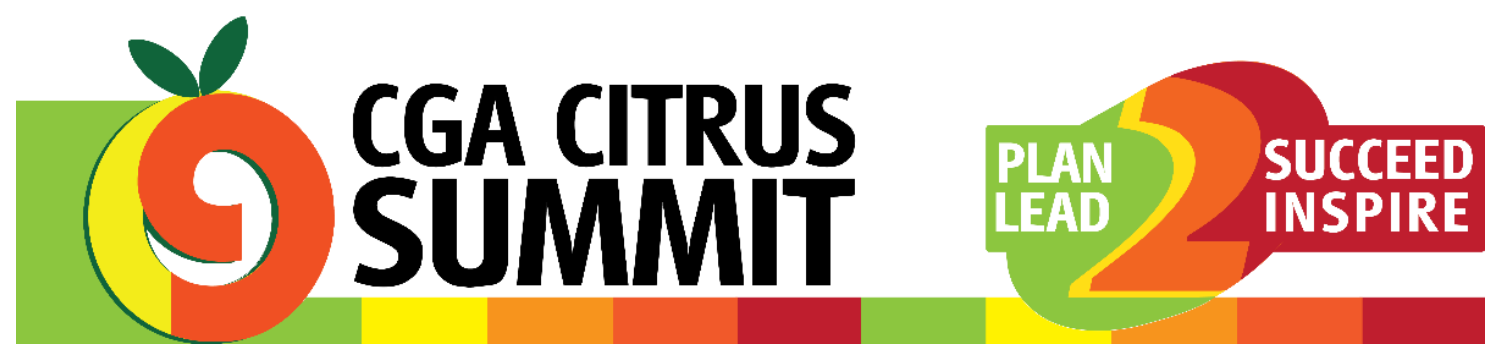


Session 2:  
Sustainable Development



# Human Capital Development

Jacomien de Klerk  
General manager  
Citrus Academy



# Citrus Industry Employment – Farms

|                         | 2009                | 2016                | 2021          | 2026           |
|-------------------------|---------------------|---------------------|---------------|----------------|
| Hectares                | 56 623ha            | 68 272ha            | 87 366ha      | 95 590ha       |
| Permanent employees     | 17 987              | 24 764              | 31 690        | 34 673         |
| <i>per ha</i>           | <i>0.318</i>        | <i>0.363</i>        |               |                |
| Seasonal employees      | 38 915              | 52 674              | 67 406        | 73 751         |
| <i>per ha</i>           | <i>0.687</i>        | <i>0.772</i>        |               |                |
| <b>Total Employment</b> | <b>56 902</b>       | <b>77 439</b>       | <b>99 096</b> | <b>108 424</b> |
| <i>per ha</i>           | <b><i>1.005</i></b> | <b><i>1.134</i></b> |               |                |



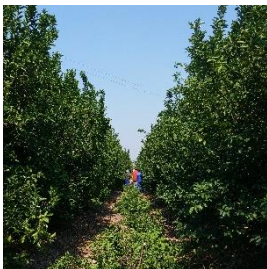
# Citrus Industry Employment – Packhouses

|                         | 2016          | 2021          | 2026          |
|-------------------------|---------------|---------------|---------------|
| Cartons                 | 107m          | 137m          | 150m          |
|                         |               |               |               |
| Permanent employees     | 16 166        | 20 687        | 22 634        |
| <i>per carton</i>       | <i>0.151</i>  |               |               |
| Seasonal employees      | 53 500        | 68 463        | 74 907        |
| <i>per carton</i>       | <i>0.500</i>  |               |               |
| <b>Total Employment</b> | <b>69 666</b> | <b>89 150</b> | <b>97 542</b> |
| <i>per ha</i>           | <i>0.651</i>  |               |               |



# Total Direct Employment

|                         | 2016           | 2021           | 2026           |
|-------------------------|----------------|----------------|----------------|
| Hectares                | 68 272ha       | 87 366ha       | 95 590ha       |
| Cartons                 | 107m           | 137m           | 150m           |
|                         |                |                |                |
| Permanent employees     | 40 930         | 52 377         | 57 307         |
| Seasonal employees      | 106 174        | 135 869        | 147 658        |
| <b>Total Employment</b> | <b>147 104</b> | <b>188 246</b> | <b>205 965</b> |



# Citrus Industry Occupations

| ON FARM                     | 2016   | 2021   | 2026   |
|-----------------------------|--------|--------|--------|
| <b>Production Staff</b>     |        |        |        |
| Workers - Seasonal          | 52 674 | 67 406 | 73 751 |
| Workers - Permanent         | 14 822 | 18 967 | 20 752 |
| Supervisors                 | 1 612  | 2 063  | 2 257  |
| Tractor Drivers             | 3 388  | 4 336  | 4 744  |
| IPM Scouts                  | 552    | 707    | 773    |
| IPM Managers                | 134    | 172    | 188    |
| Irrigation Managers         | 552    | 707    | 773    |
| Production Managers         | 798    | 1 021  | 1 117  |
| Farm Managers               | 513    | 656    | 718    |
| <b>Maintenance Staff</b>    |        |        |        |
| Diesel Mechanics            | 266    | 340    | 372    |
| Electrician                 | 114    | 146    | 160    |
| Plumber                     | 76     | 97     | 106    |
| Fitter and Turner           | 38     | 49     | 53     |
| Artisan Assistant           | 76     | 97     | 106    |
| <b>Administration Staff</b> |        |        |        |
| Receptionist                | 399    | 510    | 558    |
| Office Admin                | 114    | 146    | 160    |
| Accounts Clerk              | 361    | 462    | 505    |
| Accountant                  | 171    | 219    | 239    |
| Financial Manager           | 19     | 24     | 27     |
| HR Clerk                    | 133    | 170    | 186    |
| HR Manager                  | 152    | 194    | 213    |
| Logistics Clerk             | 38     | 49     | 53     |
| Logistics Manager           | 19     | 24     | 27     |
| Store Clerk                 | 209    | 267    | 292    |
| Stores Manager              | 57     | 73     | 80     |
| QC Assistance               | 76     | 97     | 106    |
| QC Controller               | 76     | 97     | 106    |

| IN PACKHOUSE                | 2016   | 2021   | 2026   |
|-----------------------------|--------|--------|--------|
| <b>Production Staff</b>     |        |        |        |
| Workers - Seasonal          | 53 500 | 68 463 | 74 907 |
| Workers - Permanent         | 8 278  | 10 593 | 11 590 |
| Packline Supervisors        | 803    | 1 028  | 1 125  |
| Forklift Drivers            | 1 497  | 1 916  | 2 096  |
| QC Assistance               | 657    | 841    | 920    |
| QC Manager                  | 402    | 514    | 562    |
| Senior Supervisors          | 803    | 1 028  | 1 125  |
| Packhouse Managers          | 365    | 467    | 511    |
| <b>Maintenance Staff</b>    |        |        |        |
| Diesel Mechanics            | 329    | 421    | 460    |
| Electrician                 | 329    | 421    | 460    |
| Plumber                     | 183    | 234    | 256    |
| Fitter and Turner           | 110    | 140    | 153    |
| Boilermaker                 | 37     | 47     | 51     |
| Industrial Engineer         | 37     | 47     | 51     |
| Cooling Technician          | 219    | 280    | 307    |
| Artisan Assistant           | 219    | 280    | 307    |
| <b>Administration Staff</b> |        |        |        |
| Receptionist                | 292    | 374    | 409    |
| Accounts Clerk              | 256    | 327    | 358    |
| Accountant                  | 183    | 234    | 256    |
| HR Clerk                    | 183    | 234    | 256    |
| HR Manager                  | 219    | 280    | 307    |
| Logistics Clerk             | 146    | 187    | 205    |
| Logistics Manager           | 256    | 327    | 358    |
| Procurement Clerk           | 37     | 47     | 51     |
| Procurement Manager         | 37     | 47     | 51     |
| Store Clerk                 | 146    | 187    | 205    |
| Stores Manager              | 146    | 187    | 205    |



# Citrus Industry Occupations

| ON FARM                     | 2016          | 2021          | 2026          |
|-----------------------------|---------------|---------------|---------------|
| <b>Production Staff</b>     |               |               |               |
| Workers - Seasonal          | 52 674        | 67 406        | 73 751        |
| <b>Workers - Permanent</b>  | <b>14 822</b> | <b>18 967</b> | <b>20 752</b> |
| <b>Supervisors</b>          | <b>1 612</b>  | <b>2 063</b>  | <b>2 257</b>  |
| <b>Tractor Drivers</b>      | <b>3 388</b>  | <b>4 336</b>  | <b>4 744</b>  |
| <b>IPM Scouts</b>           | <b>552</b>    | <b>707</b>    | <b>773</b>    |
| IPM Managers                | 134           | 172           | 188           |
| Irrigation Managers         | 552           | 707           | 773           |
| <b>Production Managers</b>  | <b>798</b>    | <b>1 021</b>  | <b>1 117</b>  |
| <b>Farm Managers</b>        | <b>513</b>    | <b>656</b>    | <b>718</b>    |
| <b>Maintenance Staff</b>    |               |               |               |
| <b>Diesel Mechanics</b>     | <b>266</b>    | <b>340</b>    | <b>372</b>    |
| <b>Electrician</b>          | <b>114</b>    | <b>146</b>    | <b>160</b>    |
| Plumber                     | 76            | 97            | 106           |
| Fitter and Turner           | 38            | 49            | 53            |
| <b>Artisan Assistant</b>    | <b>76</b>     | <b>97</b>     | <b>106</b>    |
| <b>Administration Staff</b> |               |               |               |
| Receptionist                | 399           | 510           | 558           |
| Office Admin                | 114           | 146           | 160           |
| Accounts Clerk              | 361           | 462           | 505           |
| Accountant                  | 171           | 219           | 239           |
| Financial Manager           | 19            | 24            | 27            |
| HR Clerk                    | 133           | 170           | 186           |
| HR Manager                  | 152           | 194           | 213           |
| Logistics Clerk             | 38            | 49            | 53            |
| Logistics Manager           | 19            | 24            | 27            |
| Store Clerk                 | 209           | 267           | 292           |
| Stores Manager              | 57            | 73            | 80            |
| QC Assistance               | 76            | 97            | 106           |
| QC Controller               | 76            | 97            | 106           |

| IN PACKHOUSE                | 2016       | 2021         | 2026         |
|-----------------------------|------------|--------------|--------------|
| <b>Production Staff</b>     |            |              |              |
| Workers - Seasonal          | 53 500     | 68 463       | 74 907       |
| Workers - Permanent         | 8 278      | 10 593       | 11 590       |
| <b>Packline Supervisors</b> | <b>803</b> | <b>1 028</b> | <b>1 125</b> |
| Forklift Drivers            | 1 497      | 1 916        | 2 096        |
| <b>QC Assistance</b>        | <b>657</b> | <b>841</b>   | <b>920</b>   |
| <b>QC Manager</b>           | <b>402</b> | <b>514</b>   | <b>562</b>   |
| <b>Senior Supervisors</b>   | <b>803</b> | <b>1 028</b> | <b>1 125</b> |
| <b>Packhouse Managers</b>   | <b>365</b> | <b>467</b>   | <b>511</b>   |
| <b>Maintenance Staff</b>    |            |              |              |
| Diesel Mechanics            | 329        | 421          | 460          |
| Electrician                 | 329        | 421          | 460          |
| Plumber                     | 183        | 234          | 256          |
| Fitter and Turner           | 110        | 140          | 153          |
| Boilermaker                 | 37         | 47           | 51           |
| Industrial Engineer         | 37         | 47           | 51           |
| Cooling Technician          | 219        | 280          | 307          |
| Artisan Assistant           | 219        | 280          | 307          |
| <b>Administration Staff</b> |            |              |              |
| Receptionist                | 292        | 374          | 409          |
| Accounts Clerk              | 256        | 327          | 358          |
| <b>Accountant</b>           | <b>183</b> | <b>234</b>   | <b>256</b>   |
| <b>HR Clerk</b>             | <b>183</b> | <b>234</b>   | <b>256</b>   |
| <b>HR Manager</b>           | <b>219</b> | <b>280</b>   | <b>307</b>   |
| <b>Logistics Clerk</b>      | <b>146</b> | <b>187</b>   | <b>205</b>   |
| <b>Logistics Manager</b>    | <b>256</b> | <b>327</b>   | <b>358</b>   |
| Procurement Clerk           | 37         | 47           | 51           |
| Procurement Manager         | 37         | 47           | 51           |
| <b>Stores Clerk</b>         | <b>146</b> | <b>187</b>   | <b>205</b>   |
| Stores Manager              | 146        | 187          | 205          |



# Citrus Industry Occupations

| ON FARM                     | Minimum Qualification           |
|-----------------------------|---------------------------------|
| <b>Production Staff</b>     |                                 |
| Workers - Seasonal          | Skills programmes               |
| Workers - Permanent         | None, skills programmes         |
| Supervisors                 | Learnerships                    |
| Tractor Drivers             | Skills programme, licence       |
| IPM Scouts                  | Learnerships, skills programmes |
| IPM Managers                | Learnerships, BTech, B-degree   |
| Irrigation Managers         | Learnerships, BTech             |
| Production Managers         | Learnerships, BTech, B-degree   |
| Farm Managers               | B-degree, postgrad              |
| <b>Maintenance Staff</b>    |                                 |
| Diesel Mechanics            | Apprenticeship                  |
| Electrician                 | Apprenticeship                  |
| Plumber                     | Apprenticeship                  |
| Fitter and Turner           | Apprenticeship                  |
| Artisan Assistant           | Apprenticeship                  |
| <b>Administration Staff</b> |                                 |
| Receptionist                | None                            |
| Office Admin                | None                            |
| Accounts Clerk              | Certificate, diploma            |
| Accountant                  | Diploma, B-degree               |
| Financial Manager           | B-degree                        |
| HR Clerk                    | Diploma                         |
| HR Manager                  | B-degree                        |
| Logistics Clerk             | Diploma                         |
| Logistics Manager           | B-degree                        |
| Store Clerk                 | None                            |
| Stores Manager              | Diploma, learnership            |
| QC Assistance               | Skills programmes               |
| QC Controller               | Diploma                         |

| IN PACKHOUSE                | Minimum Qualification    |
|-----------------------------|--------------------------|
| <b>Production Staff</b>     |                          |
| Workers - Seasonal          | Skills programmes        |
| Workers - Permanent         | Skills programmes        |
| Packline Supervisors        | Learnerships             |
| Forklift Drivers            | Skills programmes        |
| QC Assistance               | Skills programmes        |
| QC Manager                  | Diploma                  |
| Senior Supervisors          | Learnerships             |
| Packhouse Managers          | Diploma, BTech, B-degree |
| <b>Maintenance Staff</b>    |                          |
| Diesel Mechanics            | Apprenticeship           |
| Electrician                 | Apprenticeship           |
| Plumber                     | Apprenticeship           |
| Fitter and Turner           | Apprenticeship           |
| Boilermaker                 | Apprenticeship           |
| Industrial Engineer         | B-degree                 |
| Cooling Technician          | Apprenticeship           |
| Artisan Assistant           | Apprenticeship           |
| <b>Administration Staff</b> |                          |
| Receptionist                | None                     |
| Accounts Clerk              | Certificate, diploma     |
| Accountant                  | Diploma, B-degree        |
| HR Clerk                    | Diploma                  |
| HR Manager                  | B-degree                 |
| Logistics Clerk             | Diploma                  |
| Logistics Manager           | B-degree                 |
| Procurement Clerk           | Skills programmes        |
| Procurement Manager         | Diploma                  |
| Store Clerk                 | None                     |
| Stores Manager              | Diploma, learnership     |



# Inspection, Technical Services and Research

| On Farm              |
|----------------------|
| Pest Control         |
| Irrigation           |
| Plant Nutrition      |
| Soil & Leaf Analysis |
| Marketing            |
| Training Provider    |
| Extension            |

| In Packhouse                          |
|---------------------------------------|
| Standards Inspectors                  |
| Marketing Agent                       |
| Degreening Consultant                 |
| Training Provider                     |
| Agri Chemical Consultant              |
| Wax Application Consultant            |
| Packhouse Design / Systems Consultant |
| Packaging Material Consultant         |

| Research                |
|-------------------------|
| Horticulturalists       |
| Entomologists           |
| Plant Pathologists      |
| Virologists             |
| Microbiologists         |
| Plant Geneticists       |
| Research Assistants     |
| Industrial Engineers    |
| Agricultural Economists |

- **B-degrees**
- **Postgraduate degrees**
- **CPD**

# Uncertainties

## Demand

- Effect of national minimum wage
- Changes in production unit size
- Growth in rest of fruit industry and agriculture

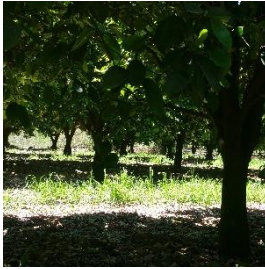
## Supply

- Instability in higher education
- Status of agricultural colleges
- Future of private learning providers
- Skills development funding
- Occupational qualifications



# Citrus Academy Human Capital Development Strategy

- Keep widening learning options range
- Limit exposure to external uncertainty
- Enable workplace skills development, tailor-made to needs
- Reduce transaction costs
- Control quality of learning
- Support higher learning institutions
- Maintain higher education supply pipeline
- Secure bursary funding sources
- Create workplace learning opportunities
- Be responsive, flexible, innovative



Session 2:  
Sustainable Development



Thank you

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