

# Case study Intelligent crop sorting machinery

## Vision-based, high-speed crop sorter & grader

Our client wanted to be able to sort and grade rice, beans and seeds at speed, remove impurities and partition into colours. They needed a high-throughput system

### Approach

- We employed hyper-spectral imaging to highlight varying degrees of light luminescence, absorption and transmission
- We developed a light, robust, low power device which could be integrated into farm machinery
- We designed the optical system, characterising the imaging optics for resolution and distortion at two wavelengths

### Benefit

- Using algorithms, we extracted the complexity from the results to create a user-friendly set of data
- High-speed, accurate sorting of a range of food products including rice, beans, seeds, nuts and vegetables
- The machine is in full production and has been highly successful

