



## British Columbia Institute of Agrologists Areas of Practice

The 38 Practice Areas with listing of practices/competencies under each.

### Agricultural Sector

1. Agricultural economics and trade
  - resource economics
2. Agroforestry
  - forest biology
  - forest ecology
  - forest land planning
  - silviculture
3. Arable land evaluation, conservation planning and management
  - agricultural management
  - agricultural planning
  - land and resource management
  - land development
  - land reclamation
  - permaculture
  - terrain analysis/mapping/management
4. Crop development, production and management
  - agronomy/crops/weeds
  - canola breeding
  - container crops
  - fertilizer
  - field management
  - greenhouse production
  - inoculants
  - integrated pest management
  - micro propagation
  - pest management
  - pesticides

5. Horticulture, fruit, vegetables and turf development production and management

- botany
- nematodes
- orchard management
- organic agriculture
- organic matter recycling
- organic vegetable production
- tree nutrition
- turf management
- vegetation analysis/assessment

6. International development

- international agriculture
- marketing
- communications
- international business/trade

7. Irrigation planning and management

- agricultural irrigation

8. Livestock development, production and management

- beef cattle management
- dairy farming
- dairy industry specialist
- genetics
- physiology
- poultry farming
- poultry production/incubation
- production of milk and meat
- range and grazing management
- range and pasture management
- wildlife/livestock interactions

9. Rural community development and support

- community development
- program development/management/evaluation

## **Environmental Sector**

10. Contaminated land assessment, remediation and decommissioning

- contaminated sites
- disease control
- ecosystem classification, conservation, restoration

- emergency spill control planning
  - environmental toxicology
  - hazardous waste handling
  - impact assessment
  - mine reclamation/rehabilitation
  - oil and gas reclamation and remediation
  - reclamation, site assessments, soils, vegetation
11. Ecological land classification and mapping
- air photo interpretation
  - ecosystem and soil description and mapping
  - ecosystem classification
  - GIS/mapping fieldwork
  - landscape ecology
  - mapping and cartography
12. Environmental impact assessment and mitigation planning
- endangered and rare species
  - pollution/air/water emissions
13. Environmental management systems and audit
14. Natural resource economics
- natural resource management
  - resource management/planning/stewardship/development/monitoring
15. Soil and land conservation, reclamation planning and management
- ecological land classification
  - ecosystem and soil description and mapping
  - ecosystem conservation
  - forest land planning
  - land and resource management
  - land development
  - land reclamation
  - land use
  - landscape ecology
16. Soil and terrain classification, mapping and land evaluation
- soil description and mapping
  - soil ecology
  - soil science
17. Vegetation identification, assessment and management

- phyto re-vegetation
- vegetation analysis/assessment/ecology/inventory/management/monitoring
- vegetation reclamation

#### 18. Water resource planning and management

- groundwater
- hydrogeology
- hydrology
- limnology
- stormwater/source control
- stream classification
- surface water engineering
- wastewater systems
- water management
- water quality
- waterpower
- watersheds

### **Agricultural and Environmental Sectors**

#### 19. Air quality monitoring and management

- pollution/air emissions

#### 20. Bio-engineering and design

- biogeochemistry
- bio-resource engineering
- biosolids
- biotechnology

#### 21. Greenhouse gas verification and management

- pollution/air/water emissions

#### 22. Land negotiations, leasing and dispositions

#### 23. Pest management and bio-control

- integrated pest management
- invasive plant management

#### 24. Rangeland evaluation, conservation planning and management

- range – grasslands management
- range and grazing management
- range and pasture management
- range ecology
- range nutrition

25. Soil fertility evaluation and nutrient management

- fertility/fertilizers
- soil ecology
- soil nutrition

26. Waste, compost and manure management

- drilling waste
- waste management

27. Wetland and riparian area evaluation, conservation planning and management

- sediment and erosion control
- slope erosion/terrain stability

### Life Sciences Sector

28. Health and nutrition products, nutraceuticals

- ginseng
- medicinals
- nutrient management
- organics

29. Renewables development: bio-fuels, bio-fibre, bio-energy

- bio-geochemistry
- bio-resource engineering

### Food Sector

30. Food, beverage and feed development and processing

- beverage industry
- meat
- production of milk and meat
- wine/viticulture

31. Food safety and bio-security

- food quality/processing
- food science/technology

32. Functional foods, nutraceuticals and nutrition

- organics
- tree fruits

### Practice Areas Common to All Four Sectors

33. Business management, investment, marketing and supply chains

- accounting/finance/business management

- common property resource management
- corporate banking
- farm business management/finance/marketing
- international business/trade
- marketing/market research
- personal and business life insurance
- sales and service
- senior agricultural administration

#### 34. Education, teaching and instruction

- inventory training
- online learning
- PD workshops
- team training
- technical training/field support

#### 35. Human resource and operations management

- government program management
- government relations
- program development/management/evaluation
- program monitoring and regulatory compliance

#### 36. Regulatory support and consultation

- consulting
- policy/analysis/development/communications support

#### 37. Research, technology development, transfer and application

- information management/systems/technology
- international development/projects
- scientific research, project design, leadership

### Others

#### 38. Aquaculture

- aquatic ecology
- aquatic habitat
- finfish aquaculture
- fish and wildlife habitat
- fresh water fisheries