**Table 1: Demographic characteristics of the respondents**

|  |  |  |
| --- | --- | --- |
| **Variable Category** | **No. of Responses**  **(n = 217)** | **Frequency**  **(%)** |
| **Age** |  |  |
| From 20 to 30 years | 16 | 7.4% |
| From 31 to 40 years old | 55 | 25.3% |
| From 41 to 50 years old | 60 | 27.6% |
| Over 50 years old | 86 | 39.6% |
| **Region** |  |  |
| Makkah | 55 | 25.3% |
| Riyadh | 27 | 12.4% |
| Qassim | 24 | 11.1% |
| Medina | 39 | 18.0% |
| Eastern | 22 | 10.1% |
| Hail | 24 | 11.1% |
| Others | 26 | 12.0% |
| **Education** |  |  |
| Secondary education or low | 42 | 19.4% |
| University education (Bachelor) | 110 | 50.7% |
| Post-graduate | 65 | 30.0% |
| **Role in date palm cultivation** |  |  |
| Farmer | 97 | 44.7% |
| Researcher | 40 | 18.4% |
| Advisor | 32 | 14.7% |
| Guidance office | 5 | 2.3% |
| Government agency | 15 | 6.9% |
| Other (professionals and scientists) | 28 | 12.9% |
| **Experience** |  |  |
| Less than 5 years | 32 | 14.7% |
| From 5 to less than 10 years | 43 | 19.8% |
| From 10 to less than 20 years | 67 | 30.9% |
| More than 20 years | 75 | 34.6% |

**Table 2: Responses of the participants regarding the major difficulties, technology handling skills and their attitudes toward agricultural ICTs**

|  |  |  |
| --- | --- | --- |
| **Variable Category** | **N** | **%** |
| Is date palm cultivation in SAUDI ARABIA facing difficulties in general |  |  |
| No | 47 | 21.7% |
| Yes | 170 | 78.3% |
| Major difficulties (if yes) |  |  |
| Lack of support and services | 40 | 24.69% |
| Difficulty in controlling pests | 82 | 50.62% |
| Lack of knowledge and awareness | 33 | 20.37% |
| Lack of communication | 7 | 4.32% |
| Most common method in managing date palm disease and pest |  |  |
| Rely on previous experience | 73 | 33.6% |
| Seek experts help | 70 | 32.3% |
| Asking for help from others such as farmers | 40 | 18.4% |
| Using technology (e.g., mobile app and search engines) | 18 | 8.3% |
| Use government services | 16 | 7.4% |
| Ease of handling technological tools in general (3.65±1.150) |  |  |
| Very hard (1) | 13 | 6.0% |
| Hard (2) | 15 | 6.9% |
| Intermediate (3) | 72 | 33.2% |
| Easy (4) | 53 | 24.4% |
| Very easy (5) | 64 | 29.5% |
| The technology uptake in agriculture work in general(3.47±1.139) |  |  |
| Never (1) | 13 | 6.0% |
| Seldom (2) | 26 | 12.0% |
| Sometimes (3) | 72 | 33.2% |
| Often (4) | 58 | 26.7% |
| Always (5) | 48 | 22.1% |
| Obstacle preventing the use of technology (if Never or Seldom) |  |  |
| Difficult to use it | 1 | 2.56% |
| Do not know about it | 11 | 28.21% |
| High cost | 4 | 10.26% |
| No need for it | 8 | 20.51% |
| Unfeasible | 10 | 25.64% |
| Unwilling | 5 | 12.82% |
| Attitudes toward relying on technology to make agriculture decisions (3.64±1.152) |  |  |
| Strongly disagree (1) | 13 | 6.0% |
| Disagree (2) | 15 | 6.9% |
| Neutral (3) | 72 | 33.2% |
| Agree (4) | 52 | 24.0% |
| Strongly agree (5) | 64 | 29.5% |
| Major obstacle (if strongly disagree or disagree) |  |  |
| It does not satisfy the needs | 7 | 25.0% |
| It appears complex | 6 | 21.4% |
| Do not trust it | 8 | 28.6% |
| All the above | 7 | 25.0% |

***Table 3: Responses of the participants regarding the major requirements and their information needs***

| **Variable Category** | **N** | **%** |
| --- | --- | --- |
| The main types of pests that need support to control |  |  |
| Insects | 97 | 44.7% |
| Nematodes | 4 | 1.8% |
| Weeds | 5 | 2.3% |
| All the above | 111 | 51.2% |
| The main types of diseases that need support to control |  |  |
| Fungal diseases | 138 | 63.6% |
| Viral diseases | 37 | 17.1% |
| Physiological diseases | 39 | 18.0% |
| Other | 3 | 1.4% |
| Which problems regarding date palm diseases and pests need the “most” help to meet information needs |  |  |
| Diagnosis of diseases and pests | 27 | 12.4% |
| Pests and diseases outbreak times | 8 | 3.7% |
| Protection from diseases and pests | 14 | 6.5% |
| Determine the control method | 12 | 5.5% |
| all the above | 156 | 71.9% |
| Need for instructions on how to apply control methods |  |  |
| No | 35 | 16.1% |
| Yes | 182 | 83.9% |
| Is more information about the control method, such as product names or brand names, beneficial |  |  |
| No | 33 | 15.2% |
| Yes | 184 | 84.8% |
| Seeing photos of plant parts with resulting symptoms from pests and diseases supports the correct diagnosis (3.51±1.375) |  |  |
| Strongly disagree | 30 | 13.8% |
| Disagree | 16 | 7.4% |
| Neutral | 56 | 25.8% |
| Agree | 44 | 20.3% |
| Strongly agree | 71 | 32.7% |
| Would you like to see recommendations only or recommendations with explanation? |  |  |
| Recommendations only | 18 | 8.3% |
| Recommendations with explanation | 199 | 91.7% |
| Which type of explanation do you prefer? |  |  |
| Relevant parts from guideline document | 23 | 10.6% |
| References to agriculture literature | 30 | 13.8% |
| Experiences of others | 6 | 2.8% |
| All the above | 158 | 72.8% |
|  |  |  |