

# Ashwagandha

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*Withania somnifera* (L.) Dunal

Family: Solanaceae

**Hindi name** : Ashwagandha, Asgandh

**Common name** : Indian ginseng, Winter cherry

**Breeding behaviour** : Self-pollinated **Habit** : Herb to undershrub

- 1. Plant habit** **PLT\_HAB**  
To be recorded at complete vegetative stage (visual scoring)
  - 1** Perennial
  - 99** Others (Specify in the "REMARKS" descriptor)
  
- 2. Plant growth habit** **GRW\_HAB**  
To be recorded after 4 weeks of transplanting (visual scoring)
  - 1** Erect
  - 2** Semi- erect
  - 99** Others (Specify in the "REMARKS" descriptor)
  
- 3. Leaf length (cm)** **LF\_LT**  
To be recorded at late vegetative stage, when leaves are fully developed (average of 10 random leaves)  
Quantitative
  
- 4. Leaf width (cm)** **LF\_WD**  
To be recorded at late vegetative stage, when leaves are fully developed (average of 10 random leaves)  
Quantitative
  
- 5. Leaf shape** **LF\_SHP**  
To be recorded at about 90 day of plant growth (visual scoring)
  - 1** Ovate
  - 2** Ovate-rounded
  - 99** Others (Specify in the "REMARKS" descriptor)
  
- 6. Leaf colour** **LF\_CLR**  
To be recorded on 3<sup>rd</sup> July developed leaf at flowering stage (visual scoring) using RHS colour chare\*\*
  - 1** Greenish yellow
  - 2** Light green
  - 3** Pale green
  - 99** Others (Specify in the "REMARKS" descriptor)
  
- 7. Main root length (cm)** **ROT\_LT**

To be recorded at the time to harvest (average of 10 random roots)

Quantitative

**8. Main root diameter (cm)**

**ROT\_DIA**

To be recorded at the time to harvest (average of 10 random roots)

Quantitative

**9. Number of secondary roots per plant**

**ROT\_PLT**

To be recorded at the time of harvest (average of 10 random roots)

Quantitative

**10. Root colour**

**ROT\_CLR**

To be recorded at the time of harvest (visual scoring) using RHS colour chart\*\*

- 1 Cream
- 2 Whitish cream
- 99 Others (Specify in the "REMARKS" descriptor)

**11. Fresh root weight per plant (g)**

**ROT\_WGTF**

To be recorded when the roots are already for harvest at leaf senescence stage (average of 10 random plants)

Quantitative

**12. Dry root weight per plant (g)**

**ROT\_WGTD**

To be recorded when the roots are ready for harvest at leaf senescence stage and roots are shade dried (average of 10 random plants)

Quantitative

**13. Days of flowering initiation**

**DAY\_FLW**

To be recorded as number of days from seed sowing to flower initiation

Quantitative

**14. Inflorescence type**

**INFL\_TYP**

To be recorded at full bloom stage (visual scoring)

- 1 Axillary fascicles
- 2 Umbellate cymes
- 99 Others (Specify in the "REMARKS" descriptor)

**15. Flower colour**

**FLW\_CLR**

To be recorded when flowers are fully opened (visual scoring) using RHS colour chart\*\*

- 1 Dull yellow
- 2 Yellow

- 3 Green
- 99 Others (Specify in the "REMARKS" descriptor)

- 16. Plant height (cm)** **PLT\_HGT**  
To be measured from ground level to the extended foliage of the plant at complete berried formation stage (average of 10 random leaves)  
  
Quantitative
- 17. Days to fruits (berry) formation** **DAY\_FRUT**  
To be recorded as number of days taken from flowering to fruit formation  
  
Quantitative
- 18. Number of berries per plant** **BERR\_PLT**  
To be recorded when berries formation is complete (average of 10 random leaves)  
  
Quantitative
- 19. Number of seeds per berry** **SED\_BERR**  
To be recorded when the berries are fully matured and harvested (average of 10 random leaves)  
  
Quantitative
- 20. Berries diameter (cm)** **BERR\_DIA**  
To be recorded on fully matured berries (average of 10 random berries)  
  
Quantitative
- 21. Berry colour** **BERR\_CLR**  
To be recorded at berry maturity stage (visual scoring) using RHS colour chart\*\*  
  
  - 1 Red
  - 2 Orange
  - 99 Others (Specify in the "REMARKS" descriptor)
- 22. Days of seed harvest** **DAY\_HARV**  
To be recorded as number of days from sowing/planting to when the berries ae matured  
  
Quantitative
- 23. Seed yield per plant (g)** **SED\_YLD**  
To be recorded when the berries are fully matured and harvested (average of 10 random plants)  
  
Quantitative
- 24. Total root alkaloid in root content (%)** **ROT\_ALKD%**  
To be recorded chemically after harvesting of roots  
  
Quantitative

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|---|------------------|
| <b>25. Total withaferine A content in leaves (%)</b><br>To be estimated by HPLC met<br>Quantitative       | <b>SOMENIFL%</b> |
| <b>26. Total withaferine A content in roots (%)</b><br>To be estimated by HPLC method<br><br>Quantitative | <b>SOMENIFR%</b> |
| <b>27. Leaf alkaloid contents (%)</b><br>To be estimated chemically after harvesting<br><br>Quantitative  | <b>ALKALOI%</b>  |