

# Facilities of IKS

## HERBAL GARDEN AND BIODIVERSITY OF AKS

### UNIVERSITY, SATNA (M.P.)

The AKS University, Satna, Madhya Pradesh was established in 2012 and spread around 100 acres area having lush green and clean campus with varied flora and fauna. The pre existing biodiversity has been maintained as it and conservation efforts of biodiversity have been made for introducing rare and endangered plant species as well as indigenus plant species. The details of the biodiversity have been given below:

#### **A. (i) Conservation of Medicinal Plants in Herbal Garden**

Plants have been used for medicinal purposes long before prehistoric period. India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants. About 8,000 herbal remedies have been codified in AYUSH systems in INDIA. Ayurveda, Unani, Siddha and Folk (tribal) medicines are the major systems of indigenous medicines. WHO (World Health Organization) estimated that 80 percent of people worldwide rely on herbal medicines for some aspect of their primary health care needs. The treatment with medicinal plants is considered very safe as there is no or minimal side effects. These remedies are in sync with nature, which is the biggest advantage.

An herbal garden is often a dedicated space in a garden, devoted to growing medicinal plants. AKS University established an herbal garden in its campus because the medicinal plants are the important parts some curricula of various departments of different faculties such as Agriculture, Pharmacy, and Life Science etc.



The objective of the herbal garden is to create awareness of conservation and traditional uses of herbs and medicinal plants to visitors, and to also be a place where students, farmers, and others can learn how to identify and conserve these important plants. There are several highly valued and useful medicinal and aromatic plants, and rare and endangered plants are planted in the plots. A name plate has been fixed in each plot denoting Hindi name, Botanical name, Family, Parts used and Name of diseases. List of medicinal plants given in Table-1.



**Table-1.Medicinal Plants of Herbal Garden**

| S.No. | Hindi Name        | Botanical Name                              | Family         | Uses                                                            |
|-------|-------------------|---------------------------------------------|----------------|-----------------------------------------------------------------|
| 1     | उलट कंबल          | <i>Abroma agusta</i> (L.) L.f.              | Malvaceae      | जोड़ों के दर्द, योनिरोग, गर्भाशय संबंधी रोग, प्रदर, पाइल्स      |
| 2     | लाल-काली गुंजा    | <i>Abrus precatorius</i> L.                 | Fabaceae       | बुखार, खांसी और जुकाम                                           |
| 3     | सफेद गुंजा        | <i>Abrus precatorius</i> L.                 | Fabaceae       | कामोत्तेजक तेल तैयार करने, बुखार, खांसी और जुकाम                |
| 4     | लाल-गुंजा         | <i>Abrus precatorius</i> L.                 | Fabaceae       | कामोत्तेजक तेल तैयार करने, बुखार, खांसी और जुकाम                |
| 5     | भूरी-गुलाबी गुंजा | <i>Abrus precatorius</i> L.                 | Fabaceae       | बुखार, खांसी और जुकाम नेत्र रोग सूजन, माइग्रेन, गठिया, केशवर्धक |
| 6     | काली गुंजा        | <i>Abrus precatorius</i> L.                 | Fabaceae       | ल्यूकोरिया साइटिका                                              |
| 7     | अपामार्ग          | <i>Achyranthes aspera</i> L.                | Amaranthaceae  | कुपचन, मूत्रविकार, उदररोग, चर्मरोग, रक्तशोधक, सर्पविष           |
| 8     | अकरकरा            | <i>Achmella oleracea</i> (L.) R.K. Jansen   | Asteraceae     | सिर दर्द, दांत दर्द, मुँह के बदबू, दांत संबंधी समस्या, हिचकी    |
| 9     | बच                | <i>Acorus calamus</i> L.                    | Acoraceae      | कंठशोथ, उदरशूल, अपस्मार, बुद्धिवर्धक, सन्धिवात                  |
| 10    | वन लहसुन          | <i>Allium ascalonicum</i> L.                | Amaryllidaceae | बाजीकारक, कर्णशूल                                               |
| 11    | ग्वार पाठा        | <i>Aloe ferox</i> Mill.                     | Asphodelaceae  | कृमिरोग, चर्मरोग, जलना, सौंदर्यप्रसाधन                          |
| 12    | ग्वार पाठा        | <i>Aloe vera</i> (L.) Burm.f.               | Asphodelaceae  | प्लीहाबृद्धि, उदरशूल, कृमिरोग, चर्मरोग, जलना, सौंदर्यप्रसाधन    |
| 13    | कुलंजन            | <i>Alpinia calacarrata</i> (Andrews) Roscoe | Zingiberaceae  | चर्मरोग, मुखशोधन, नाड़ीदौर्बल्य, खास, स्वांस, पाचन, क्षयरोग     |

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| 14 | कुलंजन       | <i>Alpinia galanga</i> (L.) Willd.                               | Zingiberaceae    | चर्मरोग, मुखशोधन, नाड़ीदौर्बल्य, खास, स्वांस, पाचन, क्षयरोग                             |
| 15 | बडी इलाइची   | <i>Amomum subulatum</i> Roxb.                                    | Zingiberaceae    | मुखरोग, दंतरोग, वामन, सिरदर्द, खांसी, चर्मरोग                                           |
| 16 | कालमेघ       | <i>Andrographis paniculata</i> (Burm.f.) Nees                    | Acanthaceae      | यकृतरोग, पीलिया, मलेरिया, बुखार, चर्मरोग, रक्तविकार                                     |
| 17 | ईश्वरमूल     | <i>Aristolochia indica</i> L.                                    | Aristolochiaceae | बुखार, त्वचा रोग, अस्थमा, सर्प दंश                                                      |
| 18 | कपूरबासी     | <i>Artemisia annua</i> L.                                        | Asteraceae       | मलेरिया और मस्तिष्क ज्वर                                                                |
| 19 | नेपाली सतावर | <i>Asparagus adscendens</i> Roxb.                                | Asparagaceae     | गैस्ट्रिक समस्या, प्रजनन क्षमता में, स्तनपान में फायदेमंद                               |
| 20 | सतावर        | <i>Asparagus racemosus</i> Willd.                                | Asparagaceae     | गैस्ट्रिक समस्या, प्रजनन क्षमता में, स्तनपान में फायदेमंद                               |
| 21 | ब्राह्मी     | <i>Bacopa monnieri</i> (L.) Wettst.                              | Plantaginaceae   | स्मृतिवर्धक, चर्मरोग, कास, अग्निमाध, उन्माद, रक्तविकार                                  |
| 22 | बज्रदंती     | <i>Barleria cristata</i> L.                                      | Acanthaceae      | बुखार, श्वास संबंधी रोग, दांत दर्द, जोड़ों में दर्द                                     |
| 12 | बज्रदंती     | <i>Barleriaprionitis</i> L.                                      | Acanthaceae      | दांत दर्द, जोड़ों में दर्द, घाव, जोड़ों के दर्द, बुखार, श्वास संबंधी रोग                |
| 24 | पुनर्नवा     | <i>Bourhavia diffusa</i> L.                                      | Nyctaginaceae    | उदर रोग, कुष्ठ, रक्त प्रदर, श्वास, रक्त वर्धक                                           |
| 25 | मंडूकपर्णी   | <i>Centella asiatica</i> (L.) Urb.                               | Apiaceae         | स्मृतिवर्धक, चर्मरोग, हृदयदौर्बल्य, कास, श्वास, अग्निमाध                                |
| 26 | इंसूलिन पौधा | <i>Chamaecostus igneus</i> (Nees & Mart.) C.D.Specht & D.W.Stev. | Costaceae        | मधुमेह, सूजन, दर्द                                                                      |
| 27 | कपूर         | <i>Cinnamomum camphora</i> (L.) J.Presl                          | Lauraceae        | त्वचा में जलन व खुजली, बंद नाक, खांसी                                                   |
| 28 | तेजपत्ता     | <i>Cinnamomum tamala</i> (Buch.-Ham.) T.Nees & C.H.Eberm.        | Lauraceae        | मस्तिष्क को तेज करने वाला, पेशाब को साफ करने वाला, पेट या आमाशय के लिए स्वास्थ्यवर्द्धक |
| 29 | हडजोड        | <i>Cissus quadrangularis</i> L.                                  | Vitaceae         | अस्थिभग्न, कर्णसाव, बवासीर, अजीर्ण, बाजीकारक                                            |
| 30 | दुधारी हडजोड | <i>Cissus quadrangularis</i> L.                                  | Vitaceae         | अस्थिभग्न, कर्णसाव, बवासीर, अजीर्ण, बाजीकारक                                            |
| 31 | हडजोड        | <i>Cissus rotundifolia</i> Vahl                                  | Vitaceae         | वात और कफ रोग, बवासीर, अंधापन, मिर्गी                                                   |
| 32 | अजवाइन       | <i>Coleus amboinicus</i> Lour.                                   | Lamiaceae        | अतिसार, कृमिरोग, हैजा                                                                   |
| 33 | पथरचट्टा     | <i>Coleus forskohlii</i> (Willd.) Briq.                          | Lamiaceae        | हार्डपरटेशन, हृदया घात, पथरी, अस्थमा, एक्जिमा, पेशाब में दर्द                           |
| 34 | गूगल         | <i>Commiphora berryi</i> (Arn.) Engl.                            | Burseraceae      | वातशामक, कृमिनाशक, आमवात, गण्डमाला, हृदयावरोध, मूत्रविकार                               |
| 35 | गूगल         | <i>Commiphora wightii</i> (Arn.) Bhandari                        | Burseraceae      | वातशामक, कृमिनाशक, आमवात, गण्डमाला, हृदयावरोध, मूत्रविकार                               |

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| 36 | शंख पुष्पी    | <i>Convolvulus prostratus</i> Forssk.                                | Convolvulaceae | मस्तिष्क दौर्बल्य, खास, श्वास, शुक्र दौर्बल्य                            |
| 37 | ओडोमास        | <i>Corymbia citriodora</i> (Hook.) K.D.Hill & L.A.S.Johnson          | Myrtaceae      | घाव, व्रण, पाचन विकार, खुजली, त्वचा रोग, हृदय रोग                        |
| 38 | महापुदर्पन    | <i>Crinum asiaticum</i> L.                                           | Amaryllidaceae | कानदर्द, जोड़ों का दर्द, बवासीर                                          |
| 39 | बाबची         | <i>Cullen corrylifolium</i> (L.) Medik.                              | Fabaceae       | कुष्ठ, व्रण, कृमिरोग, कास, श्वास, प्रमेह, चर्मरोग                        |
| 40 | आमा हल्दी     | <i>Curcuma amada</i> Roxb.                                           | Zingiberaceae  | वातशामक, दीपक. शोथहर, कफनिस्सारक, मूत्रल                                 |
| 41 | तीखुर         | <i>Curcuma angustifolia</i> Roxb.                                    | Zingiberaceae  | खांसी, गले की खरास, बुखार                                                |
| 42 | काली हल्दी    | <i>Curcuma caesia</i> Roxb.                                          | Zingiberaceae  | मोच, चोट, शूलहर, उत्तेजक                                                 |
| 43 | हल्दी         | <i>Curcuma longa</i> L.                                              | Zingiberaceae  | व्रण, रक्तविकार, खास, नाड़ीशूल, वेदनास्थापन, स्तान्यविकार                |
| 44 | नीबू घास      | <i>Cymbopogan flexuous</i> (Nees ex Steud.) W.Watson                 | Poaceae        | सर्दी, जुखाम, वातविकार, नेत्ररोग, रतौंधी                                 |
| 45 | सोमबल्ली      | <i>Cynanchum acidum</i> (Roxb.) Oken                                 | Apocynaceae    | पाचन विकार, बुखार, त्वचा रोग, घाव                                        |
| 46 | मूर्वा        | <i>Dracaena roxburghiana</i> (Schult. & Schult.f.) Byng & Christenh. | Asparagaceae   | खास, श्वास, यक्ष्मा, विबंध, अर्श, मूत्रकृच्छ                             |
| 47 | मूर्वा        | <i>Dracaena trifasciata</i> (Prain) Mabb.                            | Asparagaceae   | घाव, बाल्य, सौंदर्यप्रशाधन                                               |
| 48 | घमरा          | <i>Eclipta prostrata</i> (L.) L.                                     | Asteraceae     | केशवर्धन, केशरंजन, यकृतवृद्धि, रक्तविकार, पीलिया                         |
| 49 | जंगली अदरक    | <i>Globba schomburgkii</i> Hook.f.                                   | Zingiberaceae  | भोजन के रूप में                                                          |
| 50 | कलिहारी       | <i>Gloriosa superba</i> L.                                           | Colchicaceae   | शिरशूल, मुखप्रसव त्वचा विकार, श्वेत कुष्ठ, तंत्रिका शूल                  |
| 51 | गुडमार        | <i>Gymnema sylvestre</i> (Retz.) R.Br. ex Sm.                        | Apocynaceae    | मधुमेह, रजोशेध, विबंध, पथरी, हृदयोत्तेजक, ग्रंथिशेध                      |
| 52 | गुलवकावली     | <i>Hedychium coronarium</i> J. Koenig                                | Zingiberaceae  | ज्वर, टॉनिक, वात, नेत्ररोग                                               |
| 53 | मरोरफली       | <i>Helicteres isora</i> L.                                           | Malvaceae      | उदरशूल, अफारा, अतिसार, रक्तातिसार, कृमि रोग                              |
| 54 | केउकंद        | <i>Hellenia speciosa</i> (J. Koenig) S.R. Dutta                      | Costaceae      | यह बुखार, कुष्ठ, रक्तदोष, रक्तपित्त, श्वास, अरुचि, भ्रम, कास और डायबिटीज |
| 55 | अनंतमूल       | <i>Hemidesmus indicus</i> (L.) R.Br.                                 | Apocynaceae    | दमा और वात, पेट दर्द, पीलिया, गुर्दे की पथरी                             |
| 56 | छोटी ब्राह्मी | <i>Hydrocotyle sibthorpioides</i> Lam.                               | Apiaceae       | स्मृतिवर्धक, चर्मरोग, हृदयदौर्बल्य, कास, श्वास, अग्निमाध                 |
| 57 | अडूसा         | <i>Justicia adhatoda</i> L.                                          | Acanthaceae    | सिरदर्द, आँख का रोग, दर्द, हिचकी, खांसी श्वसन प्रणाली, मुंह के छालों,    |

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|    |               |                                                 |                | सांस संबंधी रोगों में                                                              |
| 58 | अजूबा         | <i>Kalanchoe laciniata</i> (L.) DC.             | Crassulaceae   | पथरी, घाव, रक्तप्रवाह, चोटबवासीर                                                   |
| 59 | घावपत्ता      | <i>Kalanchoe pinnata</i> (Lam.) Pers.           | Crassulaceae   | पथरी, घाव, रक्तप्रवाह, चोट                                                         |
| 60 | पुदीना        | <i>Mentha arvensis</i> L.                       | Lamiaceae      | कफनिस्सारक, शूलनाशक, वमन, अतिसार, रेचक                                             |
| 61 | पिरिमिन्ट     | <i>Mentha piperita</i> L.                       | Lamiaceae      | मुख दुर्गंधनाशक, अरुचि, अतिसार, वमन, रजोरोध                                        |
| 62 | छुईमुई        | <i>Mimosa pudica</i> L.                         | Fabaceae       | घाव, भगन्दर, अतिसार, कुष्ठ, शक्रदौर्बल्य, रक्तपित्त                                |
| 63 | दोना          | <i>Ocimum basilicum</i> L.                      | Lamiaceae      | अरुचि, कृमिरोग, प्रवाहका रक्तार्श, कास, श्वास, चर्मरोग                             |
| 64 | वन तुलसी      | <i>Ocimum americanum</i> L.                     | Lamiaceae      | कफ, सर्दी-जुकाम, एवं बुखार, पाचन शक्ति मजबूत                                       |
| 65 | लॉग तुलसी     | <i>Ocimum cinnamom</i>                          | Lamiaceae      | मूत्रल, बल्य                                                                       |
| 66 | रामा तुलसी    | <i>Ocimum gratissimum</i> L.                    | Lamiaceae      | जन्तुघ्न, कर्णशूल, दंतशूल, वल्य, मूत्रल, कृमिघ्न, काश                              |
| 67 | कपूर तुलसी    | <i>Ocimum kilimandscharicum</i> Gürke           | Lamiaceae      | नेत्ररोग, क्षुधावर्धक, दुर्गंध नाशक                                                |
| 68 | श्यामा तुलसी  | <i>Ocimum tenuiflorum</i> L.                    | Lamiaceae      | जन्तुघ्न, चर्मरोग, अग्निमांघ, रक्तविकार, कास, श्वास, यक्ष्मा, शुक्रमेह             |
| 69 | निषोथ         | <i>Operculina turpethum</i> (L.) Silva Manso    | Convolvulaceae | उदररोग, आमवात, कास, श्वास, ज्वर                                                    |
| 70 | गंधप्रसारिणी  | <i>Paederia foetida</i> L.                      | Rubiaceae      | सन्धिवात, समस्त वातव्याधि, उदरशूल, दौर्बल्य, मूत्रकृच्छ                            |
| 71 | पिप्पली       | <i>Piper longum</i> L.                          | Piperaceae     | अरुच, अजीर्ण, यकृतविकार, मस्तिष्क दौर्बल्य                                         |
| 72 | काली मिर्च    | <i>Piper nigrum</i> L.                          | Piperaceae     | त्वचा में सूजन, जोड़ों में सूजन, रोग प्रतिरोधक क्षमता बढ़ती है।                    |
| 73 | चित्रक        | <i>Plumbago zeylanica</i> L.                    | Plantaginaceae | अजीर्ण, यकृतविकार, उदरशूल, प्रसूतिकाविकार, बुखार                                   |
| 74 | पंचौली        | <i>Pogostemon cablin</i> (Blanco) Benth.        | Lamiaceae      | तनाव और अवसाद, बुखार, मसूड़ों के मजबूत करने के लिए और विभिन्न सौंदर्य उत्पादों में |
| 75 | शमी           | <i>Prosopis cineraria</i> (L.) Druce            | Fabaceae       | डायरिया, डिसेंटरी, पाइल्स, कुष्ठ, ब्रॉकाइटिस, अस्थमा, मांसपेशियों के ट्यूमर        |
| 76 | सर्पगंधा      | <i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz | Apocynaceae    | उन्माद, अपस्मार, सर्पविष, रक्तभाराधिक्य, तीब्रज्वर                                 |
| 77 | बडा चन्द्रिका | <i>Rauvolfia tetraphylla</i> L.                 | Apocynaceae    | उन्माद. अनिद्रा, रक्तचाप                                                           |
| 78 | सिताब         | <i>Ruta graveolens</i> L.                       | Rutaceae       | कानदर्द, कष्ट प्रसव, रजोरोध, अपस्तार                                               |

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| 79 | भस्मकंद         | <i>Sauromatum venosum</i><br>Dryand. Ex Aiton                | Araceae         | नपुंषकता] चर्मरोग] घाव                                                                                     |
| 80 | गजपीपली         | <i>Scindapsus officinalis</i><br>Schott.                     | Araceae         | रेचक, कृमिघ्न, अतिसार, अस्थमा                                                                              |
| 81 | संजीवनी         | <i>Selaginella bryopteris</i> (L.)<br>Baker                  | Selaginellaceae | हीट स्ट्रोक, अनियमित मासिक धर्म के<br>इलाज, लेबर पेन को कम करने और<br>पीलिया के उपचार के लिए               |
| 82 | कसौंदी          | <i>Senna sophora</i> (L.) Roxb.                              | Fabaceae        | किडनी लिवर के लिए पूर्ण रूप से<br>सुरक्षित                                                                 |
| 83 | लक्ष्मीतरु      | <i>Simarouboa glauca</i> DC.                                 | Simaroubaceae   | कैंसर, उच्च रक्तचाप, मधुमेह, पेचिश,<br>अल्सर                                                               |
| 84 | पीला घमरा       | <i>Sphagneticola<br/>calandulacea</i> (L.) Pruski            | Asteraceae      | केशयरंजक , यकृतविकार , बवासीर, घाव,<br>रक्तविकार                                                           |
| 85 | मीठी तुलसी      | <i>Stevia<br/>rebaudiana</i> (Bertoni)<br>Bertoni            | Asteraceae      | मधुमेह, दंतारोग, चर्मरोग,<br>उच्चरक्तचाप                                                                   |
| 86 | गिलोय           | <i>Tinospora cordifolia</i><br>(Willd.) Hook.f. &<br>Thomson | Menispermaceae  | कामला, मधुमेह, विषमज्वर, चर्मरोग,<br>प्रवाहिका, रक्तार्श                                                   |
| 87 | मलाबार<br>गिलोय | <i>Tinospora sinensis</i> (Lour.)<br>Merr.                   | Menispermaceae  | कामला, मधुमेह, विषमज्वर, चर्मरोग,<br>प्रवाहिका, रक्तार्श                                                   |
| 88 | दमबेल           | <i>Vincetoxicum indicum</i><br>(Burm.f.) Mabb.               | Apocynaceae     | कफनिस्सारक, अस्थमा, जीर्ण खास,<br>अतिसार, आमातिसार                                                         |
| 89 | अष्वगंधा        | <i>Withania somnifera</i> (L.)<br>Dunal                      | Solanaceae      | उदरविकार, रक्तविकार, योनिशूल,<br>मूत्राघात, गलगंड                                                          |
| 90 | अदरक            | <i>Zingiber officinale</i> Roscoe                            | Zingiberaceae   | सूजन, हृदय रोग, पेट की गैस, बवासीर,<br>कब्ज तथा पेट का फूलना, पेट का रोग,<br>खांसी, सांसों से जुड़ी समस्या |
| 91 | नरकचूर          | <i>Zinziber zerumbet</i> (L.)<br>Roscoe ex Sm.               | Zingiberaceae   | खांसी, उदरशूल, श्वास, कृमिघ्न,<br>चर्मरोग, कुष्ठ                                                           |

## (ii) Conservation of Medicinal and Aromatic Plants in Demonstrative Unit in Agriculture farm

Plants and man relationships existed since the evolution of civilization. Medicinal plants used to cure human ailments and diseases have been mentioned in Vedas, Puranas and Samhitas etc. India has been known to be the rich repository of medicinal plants since ancient times. About 8,000 medicinal plants have been documented in Traditional Knowledge Digital Library, Government of India. WHO (World Health Organization) estimated that 80 percent of people worldwide rely on herbal medicines for some aspect of their primary health care needs. Indian systems medicine including Ayurveda, Unani, Siddha and Folk (tribal) medicines are the major

prevalent systems of indigenous medicines in India. The treatment with medicinal plants is considered very safe as there is no or minimal side effects. These remedies are in sync with nature, which is the biggest advantage.

For keeping these views in the mind, a demonstrative unit of medicinal and aromatic plants has been established in Horticulture farm of A.K.S. University, Satna campus.



The objective of the demonstrative unit of medicinal and aromatic plants is to teach the horticulture and agriculture science students and to create awareness of conservation and traditional uses of herbs and medicinal plants to visitors, and to also be a place where students, farmers, and others can learn how to identify and conserve these important plants. There are several highly valued and useful medicinal and aromatic plants, and rare and endangered plants are planted in the pots in iron stands. A small name plate has been fixed in each pot denoting Hindi name, Botanical name, Family, and uses. There are about 200 plants placed in cement pots on specially made iron racks.

#### **B. Establishment of Navagraha Vatika**

A Navagraha Vatika has been established in Herbal Garden of AKS University. Navagraha Vatika (Celestial Garden) means garden of Nine planets represented by the plants or trees or bushes or grasses which have the forces of nine planets. These plants and trees of 9 planets are planted in a particular direction to get the benefit of nine planets and then it is called the Navagraha Vatika (Nine Planets Garden). The list of Navagraha plants is given in Table 2.



**Table-2. Navagraha Plants**

| S.N. | Name of Graha | Associated Plants | Botanical Name                                        |
|------|---------------|-------------------|-------------------------------------------------------|
| 1    | केतु          | कुश               | <i>Desmostachya bipinnata</i> (L.) Stapf              |
| 2    | बृहस्पति      | पीपल              | <i>Ficus religiosa</i> L.                             |
| 3    | बुध           | लटजीरा            | <i>Achyranthes aspera</i> L.                          |
| 4    | शनि           | शमी               | <i>Prosopis cinerarea</i> (L.) Druce                  |
| 5    | सूर्य         | आक                | <i>Calotropis procera</i> (Aiton) W.T. Aiton          |
| 6    | शुक्र         | गूलर              | <i>Ficus racemosa</i> L.                              |
| 7    | राहु          | दूब               | <i>Cynodon dactylon</i> (L.) Pers.                    |
| 8    | मंगल          | खैर               | <i>Senegalia catechu</i> (L.f.) P.J.H. Hurter & Mabb. |
| 9    | चन्द्र        | ढाक               | <i>Butea monosperma</i> (Lam.) Kuntze                 |

### C. Establishment of Nakshatra Vatika

Vedic religion has a concept of natal constellation. Every individual belongs to some zodiac symbols and is born on certain constellation. That specific constellation is the natal constellation and is regarded as protector of that individual. These constellations are associated with specific trees on the earth and are called Nakshatra Vriksha. Different Sanskrit treatises like Narada Purana, Narada Samhita and Raj Nighantu etc, gives a list of 27 trees to be worshipped as per natal constellations. The Said tree is treated equivalent to the God. Plantation, whole-hearted protection and worship of that tree is expected from the person with that constellation.

This God tree cannot be used even as medicine. Constellations and tree associated with them are listed in Table 3.



**Table-3 Nakshatra Vatika**

| S.N. | नक्षत्र (Nakshatra)              | संस्कृत नाम          | हिन्दी नाम  | Botanical Name                                        |
|------|----------------------------------|----------------------|-------------|-------------------------------------------------------|
| 1    | अश्विनी (Ashwini)                | विषद्रुम             | कुचला       | <i>Strychnos nux-vomica</i> L.                        |
| 2    | भरणी (Bharani)                   | आमलकी                | आंवला       | <i>Phyllanthus emblica</i> L.                         |
| 3    | कृतिका (Kritika)                 | उदुंबर               | उदुंबर गुलर | <i>Ficus racemosa</i> L.                              |
| 4    | रोहिणी (Rohini)                  | जाम्बूल              | जामुन       | <i>Syzygium cumini</i> (L.) Skeels                    |
| 5    | मृगशिरा (Mrigashira)             | खादिर                | खैर         | <i>Senegalia catechu</i> (L.f.) P.J.H. Hurter & Mabb. |
| 6    | आर्द्रा (Ardra)                  | तिन्दुक              | तैदू        | <i>Diospyros melanoxylon</i> Roxb.                    |
| 7    | पुनर्वसु (Punarvasu)             | वंश                  | बांस        | <i>Dendrocalamus strictus</i> Nees.                   |
| 8    | पुष्य (Pushya)                   | अश्वत्थ              | पीपर        | <i>Ficus religiosa</i> L.                             |
| 9    | अश्लेषा (Aslesha)                | नागा                 | नगकेशर      | <i>Mesua ferrea</i> L.                                |
| 10   | मघा (Magha)                      | वट                   | बड/वट       | <i>Ficus benghalensis</i> L.                          |
| 11   | पूर्वाफाल्गुनी (Poorvaphalguni)  | किंशुक               | पलाश        | <i>Butea monosperma</i> (Lam.) Kuntze                 |
| 12   | उत्तराफाल्गुनी (Uttaraphalguni)  | प्लाक्ष              | पाकर        | <i>Ficus virens</i> Aiton                             |
| 13   | हस्त (Hasta)                     | अरिष्ट               | रीठा        | <i>Sapindus mukorossi</i> Gaertn.                     |
| 14   | चित्रा (Chitra)                  | बिल्व                | बेल         | <i>Aegle marmelos</i> (L.) Correa                     |
| 15   | स्वाति (Swati)                   | अर्जुन               | कौहा/कोह    | <i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.  |
| 16   | विशाखा (Vishakha)                | कपित्थ               | कैथ         | <i>Limonia acidissima</i> L.                          |
| 17   | अनुराधा (Anuradha)               | बकुल                 | मौलसरी      | <i>Mimusops elengi</i> L.                             |
| 18   | ज्येष्ठा (Jyehstha)              | साल्मली              | सेमल        | <i>Bombax ceiba</i> L.                                |
| 19   | मूला (Moola)                     | अजकर्ण               | साल/हैद     | <i>Shorea robusta</i> C.F. Gaertn.                    |
| 20   | पूर्वाषाढा (Poorvashadha)        | वेतस्                | बैत         | <i>Salix tetrasperma</i> Roxb.                        |
| 21   | उत्तराषाढा (Uttarashadha)        | पनस                  | कटहल        | <i>Artocarpus heterophyllus</i> Lam.                  |
| 22   | श्रवण (Shravana)                 | अर्क                 | आंकडा       | <i>Calotropis procera</i> (Ait.) W.T. Aiton           |
| 23   | धनिष्ठा (Dhanshita)              | शमी                  | शमी         | <i>Prosopis cineraria</i> (L.) Druce                  |
| 24   | शतबिषा (Satabisha)               | कदंब                 | कदंब        | <i>Neolamackia cadamba</i> (Roxb.) Bosser             |
| 25   | पूर्वाभाद्रपद (Poorvabhadrapada) | आम                   | आम          | <i>Mangifera indica</i> L.                            |
| 26   | उत्तराभाद्रपद (Uttarabhadrapada) | निम्ब/तिक्त क अरिष्ट | नीम         | <i>Azadirachta indica</i> A. Juss                     |
| 27   | रेवती (Revati)                   | मधुक                 | महुवा       | <i>Madhuca longifolia</i> (J.Koenig ex L.) J.F.Macbr. |

#### **D. Biodiversity of AKS University**

For making campus green and clean from any kind of pollution, plantation of tree species has been made time to time. Besides, a large number of wild trees are also growing in the campus. These plantations also serve the purpose of students for practical experiments and identification of different tree species of the campus as the practical curricula of introduction to forestry and environmental science. The plant diversity available in campus of AKS University has been inventorized and name plates of each tree species were prepared and fixed on the tree species containing Hindi name and up to date botanical nomenclature. There are about 80 trees species are found in the campus. Some are wild and others are planted. Besides, planted 25 shrub species and around 137 are wild shrubs and herbs are also recorded from AKS university campus. Tree species found in university campus is listed in Table-4.





**Table-4 Trees Biodiversity of AKS University Campus**

| S.No | Hindi Name           | Botanical Name                                                | Family        | Planted year |
|------|----------------------|---------------------------------------------------------------|---------------|--------------|
| 1    | रॉयलपाम              | <i>Roystonea regia</i> O.F. Cook                              | Arecaceae     | July 2012    |
| 2    | रगतूरा               | <i>Spathodea campanulata</i> P. Beauv                         | Bignoniaceae  | July 2016    |
| 3    | कैरिवियन ट्रम्प ट्री | <i>Tabebuia aurea</i> (Silva Manso) Benth. & Hook.f. ex Moore | Bignoniaceae  | July 2016    |
| 4    | जारूल                | <i>Lagerstroemia speciosa</i> (L.) Pers.                      | Lythraceae    | July 2016    |
| 5    | सागौन                | <i>Tectona grandis</i> L.f.                                   | Lamiaceae     | July 2016    |
| 6    | शीषम                 | <i>Dalbergia sissoo</i> Roxb. ex DC.                          | Fabaceae      | July 2012    |
| 7    | फाइक्स               | <i>Ficus benjamina</i> L.                                     | Moraceae      | July 2016    |
| 8    | कदम्ब                | <i>Neolamarckia cadamba</i> (Roxb.) Bosser                    | Rubiaceae     | July 2016    |
| 9    | गुलमोहर              | <i>Delonix regia</i> (Bojer ex Hook.) Raf.                    | Fabaceae      | July 2016    |
| 10   | नीम                  | <i>Azadirachta indica</i> A. Juss.                            | Meliaceae     | Wild         |
| 11   | बेर                  | <i>Ziziphus mauritiana</i> Lam.                               | Rhamnaceae    | Wild         |
| 12   | महुआ                 | <i>Madhuca longifolia</i> (J. Koenig ex L.) J.F. Macbr.       | Sapotaceae    | Wild         |
| 13   | कस्सोद               | <i>Senna siamea</i> (Lam.) H.S. Irwin & Barneby               | Fabaceae      | July 2012    |
| 14   | अमलतास               | <i>Cassia fistula</i> L.                                      | Fabaceae      | July 2016    |
| 15   | आम                   | <i>Mangifera indica</i> L.                                    | Anacardiaceae | July 2016    |
| 16   | अमरुद                | <i>Psidium guajava</i> L.                                     | Myrtaceae     | July 2016    |
| 17   | मौलसिरी              | <i>Mimusops elengi</i> L.                                     | Sapotaceae    | July 2016    |
| 18   | गुलाबी टिकोमा        | <i>Tabebuia rosea</i> (Bertol) Bertol ex A. DC.               | Bignoniaceae  | July 2016    |
| 19   | अषोक                 | <i>Monoon longifolia</i> (Sonn.) B. Xue & R.M.K. Saunders     | Annonaceae    | July 2016    |

|    |                |                                                                      |                |           |
|----|----------------|----------------------------------------------------------------------|----------------|-----------|
| 20 | सफेद सेमल      | <i>Ceiba pentandra</i> (L.) Gaertn.                                  | Malvaceae      | July 2016 |
| 21 | सहजन           | <i>Moringa oleifera</i> Lam.                                         | Moringaceae    | July 2012 |
| 22 | खजूर           | <i>Phoenix sylvestris</i> (L.) Roxb.                                 | Arecaceae      | Wild      |
| 23 | बबूल           | <i>Vachellia nilotica</i> subsp. <i>indica</i> (Benth.) Kyal&Boatwr. | Fabaceae       | Wild      |
| 24 | रेंउजा         | <i>Vachellia leucophloea</i> (Roxb.) Maslin, Seigler&Ebinger         | Fabaceae       | Wild      |
| 25 | सिलवर ओक       | <i>Grevillea robusta</i> A. Cunn ex R.Br.                            | Proteaceae     | July 2016 |
| 26 | सिलवर डोम्बेया | <i>Dombeya pulchra</i> N. E. Br.                                     | Malvaceae      | July 2012 |
| 27 | सुबबूल         | <i>Leucaena leucocephala</i> (Lam.) De Wit.                          | Fabaceae       | Wild      |
| 28 | दहीमन          | <i>Cordia macleodii</i> (Griff.) Hook.f. & Thomson                   | Boraginaceae   | July 2016 |
| 29 | चैरी           | <i>Mutingia calabura</i> L.                                          | Mutingiaceae   | July 2016 |
| 30 | कचनार          | <i>Bauhinia purpurea</i> L.                                          | Fabaceae       | July 2016 |
| 31 | काला सिरस      | <i>Albizia lebbeck</i> (L.) Benth.                                   | Fabaceae       | July 2016 |
| 32 | चिल्ला         | <i>Holoptelea integrifolia</i> (Roxb.) Planch.                       | Ulmaceae       | Wild      |
| 33 | अरेका पाम      | <i>Dypsis lutescens</i> (H. Weddl.) Beentje & J. Dransf.             | Arecaceae      | July 2012 |
| 34 | दमस            | <i>Conocarpus lancifolius</i> Engl.                                  | Combretaceae   | July 2016 |
| 35 | लाल चंदन       | <i>Pterocarpus santalinus</i> L. f.                                  | Fabaceae       | July 2016 |
| 36 | बिलायती बबूल   | <i>Acacia auriculiformis</i> A. Cunn.                                | Fabaceae       | July 2016 |
| 37 | करंज           | <i>Pongamia pinnata</i> (L.) Pierre                                  | Fabaceae       | July 2016 |
| 38 | चाइना फैन पाम  | <i>Livistona chinensis</i> (Jacq.) R.Br. ex Mart.                    | Arecaceae      | July 2012 |
| 39 | बकाइन          | <i>Melia azedarach</i> L.                                            | Meliaceae      | July 2016 |
| 40 | महोगनी         | <i>Swietenia mahagoni</i> (L.) Jacq.                                 | Meliaceae      | July 2017 |
| 41 | सेमल           | <i>Bombax ceiba</i> L.                                               | Malvaceae      |           |
| 42 | कंचनदाना       | <i>Adenanthera pavonina</i> L.                                       | Fabaceae       | July 2012 |
| 43 | असन            | <i>Bridalia retusa</i> (L.) A. Juss.                                 | Phyllanthaceae | Wild      |
| 44 | गुरजा          | <i>Lannea coromandelica</i> (Houtt.) Merr.                           | Anacardiaceae  | Wild      |
| 45 | सप्तपर्णी      | <i>Alstonia scholaris</i> (L.) R.Br.                                 | Apocynaceae    | July 3013 |
| 46 | रक्त चम्पा     | <i>Plumeria rubra</i> L.                                             | Anacardiaceae  | July 2013 |
| 47 | बेल            | <i>Aegle marmelos</i> (L.) Correa                                    | Rutaceae       | July 2017 |
| 48 | बालम खीरा      | <i>Kigelia africana</i> (Lam.) Benth.                                | Bignoniaceae   | July 2017 |
| 49 | तेन्दू         | <i>Diospyros melanoxylon</i> Roxb.                                   | Ebenaceae      | Wild      |
| 50 | अर्जुन         | <i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.                 | Combretaceae   | July 2016 |
| 51 | पारस पीपल      | <i>Thespesia populnea</i> (L.) Sol. Ex Correa                        | Malvaceae      | July 2019 |
| 52 | पेल्टोफोरम     | <i>Peltophorum pterocarpum</i> Backer & K. Heyne                     | Fabaceae       | July 2017 |
| 53 | जामुन          | <i>Syzygium cumini</i> (L.) Skeels                                   | Myrtaceae      | Wild      |
| 54 | इमली           | <i>Tamarindus indica</i> L.                                          | Fabaceae       | July 2012 |

|                    |               |                                                       |                |              |
|--------------------|---------------|-------------------------------------------------------|----------------|--------------|
| 55                 | कचनार         | <i>Bauhinia variegata</i> L.                          | Fabaceae       | July 2017    |
| 56                 | रुद्राक्ष     | <i>Elaeocarpus angustifolius</i> Blume                | Elaeocarpaceae | July 2017    |
| 57                 | सहतूत         | <i>Morus alba</i> L.                                  | Moraceae       | 2016         |
| 58                 | सीता अषोक     | <i>Saraca asoca</i> (Roxb.) W.J. de Wilde             | Fabaceae       | July 2019    |
| 59                 | खिरनी         | <i>Manilkara hexandra</i> (Roxb.) Dubard              | Sapotaceae     | July 2019    |
| 60                 | लभेर          | <i>Cordia dichotoma</i> (G. Forst.                    | Boraginaceae   | Wild         |
| 61                 | गिरीपुष्प     | <i>Gliricidia sepium</i> (Jacq.) Walp.                | Fabaceae       | July 2017    |
| 62                 | सफेद सिरस     | <i>Albizia procera</i> (Roxb.) Benth.                 | Fabaceae       | July 2017    |
| 63                 | लीची          | <i>Litchi chinensis</i> Sonn                          | Sapindaceae    | July 2017    |
| 64                 | पीपल          | <i>Ficus religiosa</i> L.                             | Moraceae       | July 2017    |
| 65                 | पलाश          | <i>Butea monosperma</i> (Lam.) Kuntze                 | Fabaceae       | Wild/planted |
| 66                 | खैर           | <i>Senegalia catechu</i> (L.f.) P.J.H. Hurter & Mabb. | Fabaceae       | July 2021    |
| 67                 | कुचला         | <i>Strychnos nux-vomica</i> L.                        | Loganiaceae    | July 2021    |
| 68                 | उदुंबर गुलर   | <i>Ficus racemosa</i> L.                              | Moraceae       | July 2021    |
| 69                 | बड/वट         | <i>Ficus benghalensis</i> L.                          | Moraceae       | July 2021    |
| 70                 | पाकर          | <i>Ficus virens</i> Aiton                             | Moraceae       |              |
| 71                 | रीठा          | <i>Sapindus mukorossi</i> Gaertn.                     | Sapindaceae    | July 2021    |
| 72                 | कटहल          | <i>Artocarpus heterophyllus</i> Lam.                  | Moraceae       | July 2021    |
| 73                 | कैथ           | <i>Limonia acidissima</i> L.                          | Rutaceae       | July 2021    |
| 74                 | विलाइती सिरिस | <i>Albizia julibrissin</i> Durrazz.                   | Fabaceae       | July 2017    |
| 75                 | पुतजीवा       | <i>Putranjiva roxburghii</i> Wall.                    | Putranjivaceae | July 2012    |
| 76                 | नारियल        | <i>Cocos nucifera</i> L.                              | Arecaceae      | July 2012    |
| 77                 | खजूर प्रजाति  | <i>Phoenix species</i>                                | Arecaceae      | July 2012    |
| 78                 | बहेड़ा        | <i>Terminalia bellirica</i> (Gaertn.) Roxb.           | Combretaceae   | July 2019    |
| <b>Total Trees</b> |               |                                                       |                |              |

### Shrubs of AKS University Campus

There are certain ornamental and fragrant flowered shrubs are planted in the university campus for the beautification of the campus. These are given in table-2.

**Table-2 Shrubs of AKS University Campus**

| S.No. | Hindi Name  | Botanical Name                                 | Family        |
|-------|-------------|------------------------------------------------|---------------|
| 1     | गुडहल       | <i>Hibiscus rosa-sinensis</i> L.               | Malvaceae     |
| 2     | करोँदा      | <i>Carissa caranda</i> L.                      | Apocynaceae   |
| 3     | रोली        | <i>Bixa orellana</i> L.                        | Bixaceae      |
| 4     | बोगैनविलिया | <i>Bougainvillea spectabilis</i> Willd.        | Nyctaginaceae |
| 5     | कनेर        | <i>Nerium oleander</i> L.                      | Apocynaceae   |
| 6     | टिकोमा      | <i>Ticoma stans</i> (L.) Juss. ex Kunth        | Bignoniaceae  |
| 7     | नीबू        | <i>Citrus aurantiifolia</i> (Christm.) Swingle | Rutaceae      |
| 8     | इक्सोरा     | <i>Iora coccinia</i> L.                        | Rubiaceae     |

|    |                  |                                                                 |                |
|----|------------------|-----------------------------------------------------------------|----------------|
| 9  | मोर पंखी         | <i>Thusa occidentalis</i> L.                                    | Cupressaceae   |
| 10 | अरौकेरिया        | <i>Araucaria columnaris</i> (G.Forst.) Hook.                    | Araucariaceae  |
| 11 | केसिया           | <i>Senna biflora</i> Mill.                                      | Fabaceae       |
| 12 | मीठीनीम          | <i>Murraya koenigii</i> (L.) Spreng.                            | Rutaceae       |
| 13 | चांदनी           | <i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & Schult. | Apocynaceae    |
| 14 | लान्जई           | <i>Volkameria inermis</i> L.                                    | Lamiaceae      |
| 15 | डबल चांदनी       | <i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & Schult. | Apocynaceae    |
| 16 | चमेली            | <i>Jasminum multiflorum</i> (Burm.f.) Andrews                   | Oleaceae       |
| 17 | रातरानी          | <i>Cestrum nocturnum</i> L.                                     | Solanaceae     |
| 18 | रबर प्लांट       | <i>Ficus elastica</i> Roxb. ex Hornem.                          | Moraceae       |
| 19 | यूफोर्बिया       | <i>Euphorbia tirucalli</i> L.                                   | Euphorbiaceae  |
| 20 | महा सुदर्शन      | <i>Crinum asiaticum</i> L.                                      | Amaryllidaceae |
| 21 | ड्रेसीना         | <i>Dracaena reflexa</i> Lam.                                    | Asparagaceae   |
| 22 | ऐन्जेल्स ट्रंपेट | <i>Brugmansia suaveolens</i> (Humb. & Bonpl. ex Willd.) Sweet   | Solanaceae     |
| 23 | कोटन             | <i>Codiaeum variegatum</i> (L.) Rumph. ex A.Juss.               | Euphorbiaceae  |
| 24 | कोलियस           | <i>Coleus scutellarioides</i> (L.) Benth.                       | Lamiaceae      |
| 25 | केला             | <i>Canna indica</i> L.                                          | Cannaceae      |
| 26 | गंधराज           | <i>Gardenia jasminoides</i> J. Ellis                            | Rubiaceae      |
| 27 | हरसिंगार         | <i>Nyctanthes arbor-tristis</i> L.                              | Oleaceae       |
| 28 | रेडपाउडर पफ      | <i>Calliandra haematocephala</i> Hassk.                         | Fabaceae       |
| 29 | पीली कनेर        | <i>Cascabella thevetia</i> (L.) Lippold                         | Apocynaceae    |
| 30 | बांस             | <i>Dendrocalamus strictus</i> (Roxb.) Nees                      | Poaceae        |
| 31 | बांस             | <i>Bambusa vulgaris</i> Schrad. ex J.C.Wendl.                   | Poaceae        |
| 32 | नागचंपा          | <i>Plumeria pudica</i> Jacq.                                    | Apocynaceae    |
| 33 | कंधी             | <i>Abutilon indicum</i> (L.) Sweet                              | Malvaceae      |
| 34 | कंधी             | <i>Abutilon pannosum</i> (G. Forst.) Schltdl.                   | Malvaceae      |
| 35 | कटसरैया          | <i>Barleria prionitis</i> L.                                    | Acanthaceae    |
| 36 | आक               | <i>Calotropis procera</i> (Aiton) W.T.Aiton                     | Apocynaceae    |
| 37 | गुलमोहदी         | <i>Lantana camara</i> L.                                        | Verbenaceae    |
| 40 | झरबेरी           | <i>Ziziphus nummularia</i> (Burm.f.) Wight & Arn.               | Rhamnaceae     |

## Climbers of AKSU Campus

The climbers found in AKS University campus are given in Table-3

**Table-3. Climbers**

| S.N. | Local Name | Botanical Name                                         | Family         | Habit   |
|------|------------|--------------------------------------------------------|----------------|---------|
| 1    | घुंगची     | <i>Abrus precatorius</i> L.                            | Fabaceae       | Climber |
| 2    | अलमंडा     | <i>Allamanda cathartica</i> L.                         | Apocynaceae    | Climber |
| 3    | सतावर      | <i>Asparagus racemosus</i> Willd.                      | Asapragaceae   | Climber |
| 4    | वनतूअर     | <i>Cajanus scarabaeoides</i> (L.) Thouars              | Fabaceae       | Climber |
| 5    | अपराजिता   | <i>Clitoria ternatea</i> L.                            | Fabaceae       | Climber |
| 6    | कनफूटी     | <i>Cardiospermum halicacabum</i> L.                    | Anacardiaceae  | Climber |
| 7    | वनअंगूर    | <i>Causonis trifolia</i> (L.) Mabb. & J.Wen            | Vitaceae       | Climber |
| 8    | कंदूरी     | <i>Coccinia grandis</i> (L.) Voigt                     | Cucurbitaceae  | Climber |
| 9    | छिलहटा     | <i>Cocculus hirsutus</i> (L.) W.Theob.                 | Menispermaceae | Climber |
| 10   | दूधीलता    | <i>Cryptolepis buchananii</i> R.Br. ex Roem. & Schult. | Apocynaceae    | Climber |
| 11   | बराहीकंद   | <i>Dioscorea bulbifera</i> L.                          | Dioscoreaceae  | Climber |
| 12   |            | <i>Dioscorea pubera</i> Blume                          | Dioscoreaceae  | Climber |
| 13   | अनंतमूल    | <i>Ichnocarpus frutescens</i> (L.) W.T.Aiton           | Apocynaceae    | Climber |
| 14   |            | <i>Ipomoea nil</i> (L.) Roth                           | Convolvulaceae | Climber |
| 15   |            | <i>Ipomoea obscura</i> (L.) Ker Gawl.                  | Convolvulaceae | Climber |
| 16   |            | <i>Ipomoea pes-tigridis</i> L.                         | Convolvulaceae | Climber |
| 17   |            | <i>Ipomoea sindica</i> Stapf                           | Convolvulaceae | Climber |
| 18   | सेमी       | <i>Lablab purpureus</i> (L.) Sweet                     | Fabaceae       | Climber |
| 19   | लहसुनबेल   | <i>Mansoa alliacea</i> (Lam.) A.H. Gentry              | Bignoniaceae   | Climber |
| 20   | वनकरेला    | <i>Momordica charantia</i> L.                          | Cucurbitaceae  | Climber |
| 21   | किवांच     | <i>Mucuna pruriens</i> (L.) DC.                        | Fabaceae       | Climber |
| 22   | निषेथ      | <i>Operculina turpethum</i> (L.) Silva Manso           | Convolvulaceae | Climber |
| 23   | उतरनी      | <i>Pergularia daemia</i> (Forssk.) Chiov.              | Apocynaceae    | Climber |
| 24   | फांट       | <i>Rivea hypocrateriformis</i> (Desr.) Choisy          | Convolvulaceae | Climber |
| 25   |            | <i>Rhynchosia minima</i> (L.) DC.                      | Fabaceae       | Climber |
| 26   | मासपरनी    | <i>Teramnus labialis</i> (L.f.) Spreng.                | Fabaceae       | Climber |
| 27   | गिलोय      | <i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson | Menispermaceae | Climber |
| 28   | षिवलिंगी   | <i>Diplocyclos malmatus</i> (L.) Jeffrey               | Cucurbitaceae  | Climber |
| 29   | जंगली परवल | <i>Trichosanthes cucumerina</i> L.                     | Cucurbitaceae  | Climber |
| 30   | समुद्रसोख  | <i>Argyria nervosa</i> (Burm.f.) Bojer                 | Convolvulaceae | Climber |

## Grasses of AKS University Campus

The grasses found within the campus are given in the Table-4.

**Table- 4. Grasses**

| S.N. | Local Name | Botanical Name                                                                                | Family  | Habit |
|------|------------|-----------------------------------------------------------------------------------------------|---------|-------|
| 1    | घास        | <i>Alloteropsis cimicina</i> (L.) Stapf                                                       | Poaceae | Herb  |
| 2    | घास        | <i>Andropogon pumilus</i> Roxb.                                                               | Poaceae | Herb  |
| 3    | फूली       | <i>Apluda mutica</i> L.                                                                       | Poaceae | Herb  |
| 4    | लांप       | <i>Aristida adscensionis</i> L.                                                               | Poaceae | Herb  |
| 5    | घास        | <i>Arthraxon lancifolius</i> (Trin.) Hochst.                                                  | Poaceae | Herb  |
| 6    | घास        | <i>Bothriochloa pertusa</i> (L.) A. Camus                                                     | Poaceae | Herb  |
| 7    | घास        | <i>Cenchrus americanus</i> (L.) Morrone, syn.<br><i>Setaria glauca</i> (L.) P. Beauv.         | Poaceae | Herb  |
| 8    | फुलेरा     | <i>Cenchrus ciliaris</i> L.                                                                   | Poaceae | Herb  |
| 9    | घास        | <i>Cenchrus setigerus</i> Vahl (Poaceae)                                                      | Poaceae | Herb  |
| 10   | घास        | <i>Chloris virgata</i> Sw. (Poaceae)                                                          | Poaceae | Herb  |
| 11   | खस         | <i>Chrysopogon zizanioides</i> (L.) Roberty, syn.<br><i>Vetiveria zizanioides</i> (L.) Nash   | Poaceae | Herb  |
| 12   | रुसाघास    | <i>Cymbopogon martini</i> (Roxb.) W.Watson                                                    | Poaceae | Herb  |
| 13   | दूब        | <i>Cynodon dactylon</i> (L.) Pers.                                                            | Poaceae | Herb  |
| 14   | घास        | <i>Dactyloctenium aegyptium</i> (L.) Willd.                                                   | Poaceae | Herb  |
| 15   | कुस        | <i>Desmostachya bipinnata</i> (L.) Stapf                                                      | Poaceae | Herb  |
| 16   | मारवेल     | <i>Dichanthium annulatum</i> (Forssk.) Stapf                                                  | Poaceae | Herb  |
| 17   | घास        | <i>Digitaria ciliaris</i> (Retz.) Keeler                                                      | Poaceae | Herb  |
| 18   | घास        | <i>Digitaria setigera</i> Roth                                                                | Poaceae | Herb  |
| 19   | सामा       | <i>Echinochloa colonum</i> (L.) Link                                                          | Poaceae | Herb  |
| 20   | घास        | <i>Echinochloa crus-galli</i> (L.) P. Beauv.                                                  | Poaceae | Herb  |
| 21   | घास        | <i>Eleusine indica</i> (L.) Gaertn.                                                           | Poaceae | Herb  |
| 22   | घास        | <i>Enteropogon dolichostachya</i> (Lag.) Keng.<br>syn. <i>Chloris dolichostachya</i> Lag.     | Poaceae | Herb  |
| 23   | भुरभुरसी   | <i>Eragrostis amabilis</i> (L.) Wight & Arn.<br>syn. <i>Eragrostis tenella</i> (L.) P. Beauv. | Poaceae | Herb  |
| 24   | घास        | <i>Eragrostis ciliaris</i> (L.) R.Br.                                                         | Poaceae | Herb  |
| 25   | कुसाल      | <i>Heteropogon contortus</i> (L.) P. Beauv. ex<br>Roem. & Schult.                             | Poaceae | Herb  |
| 26   | मुछेल      | <i>Iseilema prostratum</i> (L.) Andersson, syn. <i>I. laxum</i> Hack.                         | Poaceae | Herb  |
| 27   | छीर        | <i>Imperata cylindrica</i> (L.) P. Beauv.                                                     | Poaceae | Herb  |
| 28   | भदोर       | <i>Ischaemum rugosum</i> Salisb.                                                              | Poaceae | Herb  |
| 29   | घास        | <i>Leptochloa panicea</i> (Retz.) Ohwi                                                        | Poaceae | Herb  |
| 30   | घास        | <i>Panicum paludosum</i> Roxb.                                                                | Poaceae | Herb  |
| 31   | कोदो       | <i>Paspalum scrobiculatum</i> L.                                                              | Poaceae | Herb  |
| 32   | घास        | <i>Phalaris minor</i> Retz.                                                                   | Poaceae | Herb  |
| 33   | घास        | <i>Polypogon monspeliensis</i> (L.) Desf.                                                     | Poaceae | Herb  |
| 34   | कांस       | <i>Saccharum spontaneum</i> L.                                                                | Poaceae | Herb  |

|    |               |                                                                                                         |            |      |
|----|---------------|---------------------------------------------------------------------------------------------------------|------------|------|
| 35 | घास           | <i>Setaria flavid</i> (Retz.) Veldkamp, syn.<br><i>Paspalidium flavidum</i> (Retz.) A. Camus            | Poaceae    | Herb |
| 36 | घास           | <i>Setaria verticillata</i> (L.) P. Beauv.                                                              | Poaceae    | Herb |
| 37 | बारु          | <i>Sorghum halepense</i> (L.) Pers.                                                                     | Poaceae    | Herb |
| 38 | गुनहेर, भोंड़ | <i>Themeda quadrivalvis</i> (L.) Kuntze                                                                 | Poaceae    | Herb |
| 39 | घास           | <i>Themeda triandra</i> Forssk.                                                                         | Poaceae    | Herb |
| 40 | मुंज          | <i>Tripiidium benghalense</i> (Retz.) H. Hchol.,<br>syn. <i>Saccharum benghalense</i> Retz.             | Poaceae    | Herb |
| 41 | घास           | <i>Urochloa ramosa</i> (L.) T. Q. Nguyen, syn.<br><i>Brachiaria ramosa</i> (L.) Stapf                   | Poaceae    | Herb |
| 42 | घास           | <i>Urochloa reptans</i> (L.) Stapf, syn.<br><i>Brachiaria reptans</i> (L.) C.A. Gardner &<br>C.E. Hubb. | Poaceae    | Herb |
| 43 | मोथा          | <i>Cyperus rotundus</i> L.                                                                              | Cyperaceae | Herb |
| 44 | मोथा          | <i>Cyperus iria</i> L.                                                                                  | Cyperaceae | Herb |
| 45 |               | <i>Fimbristylis dichotoma</i> (L.) Vahl                                                                 | Cyperaceae | Herb |

### Wild Herbs of AKS University Campus

The university campus is very rich in wild flowering plants. An effort has been made to list the available wild flora of the campus. These floras are listed in table-6.

**Table-5. Wild herbs**

| S.No. | Botanical Name                                                      | Family          | Habit |
|-------|---------------------------------------------------------------------|-----------------|-------|
| 1     | <i>Abelmoschus manihot</i> (L.) Medik.                              | Malvaceae       | Herb  |
| 2     | <i>Achyranthes aspera</i> L.                                        | Amaranthaceae   | Herb  |
| 3     | <i>Acmella radicans</i> (Jacq.) R.K.Jansen                          | Asteraceae      | Herb  |
| 4     | <i>Acmella uliginosa</i> (Sw.) Cass.                                | Asteraceae      | Herb  |
| 5     | <i>Aeschynomene indica</i> L.                                       | Fabaceae        | Herb  |
| 6     | <i>Ageratum conyzoides</i> L.                                       | Asteraceae      | Herb  |
| 7     | <i>Alternanthera sessilis</i> (L.) R.Br. ex DC.                     | Acanthaceae     | Herb  |
| 8     | <i>Alysicarpus monilifer</i> (L.) DC.                               | Fabaceae        | Herb  |
| 9     | <i>Alysicarpus vaginalis</i> (L.) DC.                               | Fabaceae        | Herb  |
| 10    | <i>Alysicarpus longifolius</i> (Rottler ex Spreng.)<br>Wight & Arn. | Fabaceae        | Herb  |
| 11    | <i>Amaranthus spinosus</i> L.                                       | Amaranthaceae   | Herb  |
| 12    | <i>Amaranthus viridis</i> L.                                        | Amaranthaceae   | Herb  |
| 13    | <i>Anisomeles indica</i> (L.) Kuntze                                | Lamiaceae       | Herb  |
| 14    | <i>Arenaria serpyllifolia</i> L.                                    | Caryophyllaceae | Herb  |
| 15    | <i>Asphodelus tenuifolius</i> Cav.                                  | Asphodelaceae   | Herb. |
| 16    | <i>Barleria prionitis</i> L.                                        | Acanthaceae     | Shrub |
| 17    | <i>Bergia ammannioides</i> Roxb.                                    | Elatinaceae     | Herb  |
| 18    | <i>Blumea lacera</i> (Burm.f.) DC.                                  | Asteraceae      | Herb  |
| 19    | <i>Bouffordia dichotoma</i> (Willd.) H.Ohashi &<br>K.Ohashi         | Fabaceae        | Herb  |
| 20    | <i>Calotropis procera</i> (Aiton) W.T.Aiton                         | Apocynaceae     | Shrub |

|    |                                                           |                |       |
|----|-----------------------------------------------------------|----------------|-------|
| 21 | <i>Celosia argentea</i> L.                                | Amaranthaceae  | Herb  |
| 22 | <i>Chenopodium album</i> L.                               | Amaranthaceae  | Herb  |
| 23 | <i>Chenopodium murale</i> (L.) S.Fuentes, Uotila & Borsch | Amaranthaceae  | Herb  |
| 24 | <i>Cleome viscosa</i> L.                                  | Cleomaceae     | Herb  |
| 25 | <i>Commelina benghalensis</i> L.                          | Commelinaceae  | Herb  |
| 26 | <i>Commelina forskalii</i> Vahl                           | Commelinaceae  | Herb  |
| 27 | <i>Convolvulus arvensis</i> L.                            | Convolvulaceae | Herb  |
| 28 | <i>Corchorus aestuans</i> L.                              | Malvaceae      | Herb  |
| 29 | <i>Corchorus capsularis</i> L.                            | Malvaceae      | Herb  |
| 30 | <i>Corchorus olitorius</i> L.                             | Malvaceae      | Herb  |
| 31 | <i>Corchorus trilocularis</i> L.                          | Malvaceae      | Herb  |
| 32 | <i>Crotalaria medicaginea</i> Lam.                        | Fabaceae       | Herb  |
| 33 | <i>Cyanthillium cinereum</i> (L.) H.Rob.                  | Asteraceae     | Herb  |
| 34 | <i>Cynodon dactylon</i> (L.) Pers.                        | Poaceae        | Herb  |
| 35 | <i>Datura metel</i> L.                                    | Solanaceae     | Herb  |
| 36 | <i>Datura stramonium</i> L.                               | Solanaceae     | Herb  |
| 37 | <i>Dactyloctenium aegyptium</i> (L.) Willd.               | Poaceae        | Herb  |
| 38 | <i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.         | Acanthaceae    | Herb  |
| 39 | <i>Digera muricata</i> (L.) Mart.                         | Amaranthaceae  | Herb  |
| 40 | <i>Eclipta prostrata</i> (L.) L.                          | Asteraceae     | Herb  |
| 41 | <i>Emilia sonchifolia</i> (L.) DC.                        | Asteraceae     | Herb  |
| 42 | <i>Euphorbia dracunculoides</i> Lam.                      | Euphorbiaceae  | Herb  |
| 43 | <i>Euphorbia heterophylla</i> L.                          | Euphorbiaceae  | Herb  |
| 44 | <i>Euphorbia hirta</i> L.                                 | Euphorbiaceae  | Herb  |
| 45 | <i>Euphorbia prostrata</i> Aiton                          | Euphorbiaceae  | Herb  |
| 46 | <i>Evolvulus nummularius</i> (L.) L.                      | Convolvulaceae | Herb  |
| 47 | <i>Fumaria indica</i> (Hausskn.) Pugsley                  | Fumariaceae    | Herb  |
| 48 | <i>Gomphrena celosioides</i> Mart.                        | Amaranthaceae  | Herb  |
| 49 | <i>Grona triflora</i> (L.) H.Ohashi & K.Ohashi            | Fabaceae       | Herb  |
| 50 | <i>Helichrysum luteoalbum</i> (L.) Rchb.                  | Asteraceae     | Herb  |
| 51 | <i>Mesosphaerum suaveolens</i> (L.) Kuntze                | Lamiaceae      | Herb  |
| 52 | <i>Indigofera linifolia</i> (L.f.) Retz.                  | Fabaceae       | Herb  |
| 53 | <i>Indigofera linnaei</i> Ali                             | Fabaceae       | Herb  |
| 54 | <i>Indigofera tinctoria</i> L.                            | Fabaceae       | Herb  |
| 55 | <i>Lantana camara</i> L.                                  | Verbenaceae    | Shrub |
| 56 | <i>Lathyrus aphaca</i> L.                                 | Fabaceae       | Herb  |
| 57 | <i>Lathyrus sativus</i> L.                                | Fabaceae       | Herb  |
| 58 | <i>Launaea procumbens</i> (Roxb.) Ramayya & Rajagopal     | Asteraceae     | Herb  |
| 59 | <i>Launaea aspleniifolia</i> (Willd.) Hook.f.             | Asteraceae     | Herb  |
| 60 | <i>Leucas cephalotes</i> (Roth) Spreng.                   | Lamiaceae      | Herb  |
| 61 | <i>Leucas aspera</i> (Willd.) Link                        | Lamiaceae      | Herb  |
| 62 | <i>Ludwigia octovalvis</i> (Jacq.) P.H.Raven              | Onagraceae     | Herb  |
| 63 | <i>Lysimachia arvensis</i> (L.) U.Manns & Anderb.         | Primulaceae    | Herb  |
| 64 | <i>Medicago lupulina</i> L.                               | Fabaceae       | Herb  |
| 65 | <i>Medicago polymorpha</i> L.                             | Fabaceae       | Herb  |

|     |                                                                      |                  |      |
|-----|----------------------------------------------------------------------|------------------|------|
| 66  | <i>Malvastrum coromandelianum</i> (L.) Garcke                        | Malvaceae        | Herb |
| 67  | <i>Melilotus albus</i> Medik.                                        | Fabaceae         | Herb |
| 68  | <i>Melilotus indicus</i> (L.) All.                                   | Fabaceae         | Herb |
| 69  | <i>Melochia corchorifolia</i> L.                                     | Malvaceae        | Herb |
| 70  | <i>Merremia emarginata</i> (Burm.f.) Hallier f.                      | Convolvulaceae   | Herb |
| 71  | <i>Orobanche aegyptiaca</i> Pers.                                    | Orobanchaceae    | Herb |
| 72  | <i>Oxalis corniculata</i> L.                                         | Oxalidaceae      | Herb |
| 73  | <i>Oxalis violacea</i> L.                                            | Oxalidaceae      | Herb |
| 74  | <i>Parasopbia delphiniifolia</i> (L.) H.-P.Hofm. & Eb.Fisch.         | Scrophulariaceae | Herb |
| 75  | <i>Parthenium hysterophorus</i> L.                                   | Asteraceae       | Herb |
| 76  | <i>Persicaria glabra</i> (Willd.) M.Gómez                            | Polygonaceae     | Herb |
| 77  | <i>Phalaris minor</i> Retz.                                          | Poaceae          | Herb |
| 78  | <i>Phyllanthus amarus</i> Schumach. & Thonn.                         | Phyllanthaceae   | Herb |
| 79  | <i>Phyllanthus fraternus</i> G.L.Webster                             | Phyllanthaceae   | Herb |
| 80  | <i>Phyllanthus maderaspatensis</i> L.                                | Phyllanthaceae   | Herb |
| 81  | <i>Phyllanthus urinaria</i> L.                                       | Phyllanthaceae   | Herb |
| 82  | <i>Phyllanthus virgatus</i> G.Forst.                                 | Phyllanthaceae   | Herb |
| 83  | <i>Physalis angulata</i> L.                                          | Solanaceae       | Herb |
| 84  | <i>Physalis pruinosa</i> L.                                          | Solanaceae       | Herb |
| 85  | <i>Pleurolobus gangeticus</i> (L.) J.St.-Hil. ex H.Ohashi & K.Ohashi | Fabaceae         | Herb |
| 86  | <i>Polypogon monspeliensis</i> (L.) Desf.                            | Poaceae          | Herb |
| 87  | <i>Pupalia lappacea</i> (L.) Juss.                                   | Amaranthaceae    | Herb |
| 88  | <i>Ranunculus sceleratus</i> L.                                      | Ranunculaceae    | Herb |
| 89  | <i>Rumex dentatus</i> L.                                             | Polygonaceae     | Herb |
| 90  | <i>Saccharum spontaneum</i> L.                                       | Poaceae          | Herb |
| 91  | <i>Salvia plebeia</i> R.Br.                                          | Lamiaceae        | Herb |
| 92  | <i>Scoparia dulcis</i> L.                                            | Plantaginaceae   | Herb |
| 93  | <i>Sesbania sesban</i> (L.) Merr.                                    | Fabaceae         | Herb |
| 94  | <i>Sida acuta</i> Burm.f.                                            | Malvaceae        | Herb |
| 95  | <i>Sida alba</i> L.                                                  | Malvaceae        | Herb |
| 96  | <i>Sida cordata</i> (Burm.f.) Borss.Waalk.                           | Malvaceae        | Herb |
| 97  | <i>Sida cordifolia</i> L.                                            | Malvaceae        | Herb |
| 98  | <i>Sida rhombifolia</i> L.                                           | Malvaceae        | Herb |
| 99  | <i>Sonchus asper</i> (L.) Hill                                       | Asteraceae       | Herb |
| 100 | <i>Sonchus oleraceus</i> L.                                          | Asteraceae       | Herb |
| 101 | <i>Spergula arvensis</i> L.                                          | Caryophyllaceae  | Herb |
| 102 | <i>Tephrosia pumila</i> (Lam.) Pers.                                 | Fabaceae         | Herb |
| 103 | <i>Tephrosia purpurea</i> (L.) Pers.                                 | Fabaceae         | Herb |
| 104 | <i>Tephrosia strigosa</i> (Dalzell) Santapau & Maheshw.              | Fabaceae         | Herb |
| 105 | <i>Themeda quadrivalvis</i> (L.) Kuntze                              | Poaceae          | Herb |
| 106 | <i>Tridax procumbens</i> L.                                          | Asteraceae       | Herb |
| 107 | <i>Trigonella balansae</i> Boiss. & Reut.                            | Fabaceae         | Herb |
| 108 | <i>Sauromatum venosum</i> (Dryand. ex Aiton) Kunth                   | Araceae          | Herb |

|     |                                       |                |      |
|-----|---------------------------------------|----------------|------|
| 109 | <i>Urena lobata</i> L.                | Malvaceae      | Herb |
| 110 | <i>Veronica anagallis-aquatica</i> L. | Plantaginaceae | Herb |
| 111 | <i>Vicia hirsuta</i> (L.) Gray        | Fabaceae       | Herb |
| 112 | <i>Vicia sativa</i> L.                | Fabaceae       | Herb |
| 113 | <i>Waltheria indica</i> L.            | Malvaceae      | Herb |
| 114 | <i>Xanthium strumarium</i> L.         | Asteraceae     | Herb |

#### E. Establishment of Windbreak

Establishment of Windbreak, Poly House of AKS Campus was subjected to heavy wind thrust specially for summer season, so protect from fast wind velocity, wind break has been established by planting suitable following species in U pattern with aerodynamic shape around the poly house area.

| S.No | Hindi Name  | Botanical Name                                   | Family    | Year of Plantation | Number of Plants |
|------|-------------|--------------------------------------------------|-----------|--------------------|------------------|
| 01   | पीला बांस   | <i>Bamboosa vulgaris</i><br>Schrud. ex .C.Wendl. | Poaceae   | July 2019          | 104              |
| 02   | असमिया बांस | <i>Bamboosa balkooa</i><br>Roxb.                 | Poaceae   | July 2019          | 80               |
| 03   | शीशम        | <i>Dalberrgia sissoo</i><br>Roxb. ex DC.         | Fabaceae  | July 2019          | 180              |
| 04   | महोगनी      | <i>Sweitenia mahogani</i><br>(L.) Jacq           | Meliaceae | July 2019          | 184              |
|      | Total       |                                                  |           |                    | 548              |

#### F. Avenue Plantation

| S.No | Site of Plantation               | Number of Plants |
|------|----------------------------------|------------------|
| 01   | Around the research field        | 103              |
| 02   | Horticulture Research farm       | 20               |
| 03   | E block                          | 60               |
| 04   | Around the play ground           | 205              |
| 05   | In front of workshop             | 46               |
| 06   | Roadside from D Block to E block | 348              |
|      | <b>Total</b>                     | <b>782</b>       |

#### Exotic Plants

| S.No | Botanical name of plants                                        | Number of Plants | Survival status | Nativity      |
|------|-----------------------------------------------------------------|------------------|-----------------|---------------|
| 01   | <i>Tabebuia aurea</i> (Silva Manso)<br>Benth. &Hook.f. ex Moore | 32               | 29              | El Salvador   |
| 02   | <i>Swietenia mahagoni</i> (L.) Jacq.                            | 184              | 175             | S. Florida to |

|    |                                     |    |    |                             |
|----|-------------------------------------|----|----|-----------------------------|
|    |                                     |    |    | Caribbean                   |
| 04 | <i>Conocarpus lancifolius</i> Engl. | 68 | 68 | Gulf Countries (Somalia).   |
| 05 | <i>Eleocarpus lancifolius</i> Roxb. | 11 | 9  | Endemic to Eastern Himalaya |