Water-Conscious Planting at SRM University-AP

SRM University–AP plants and maintains its landscape to use as little water as practical. The maintenance team keeps a plantation record that classifies every species planted as drought tolerant, moderately drought tolerant or not. Plants are watered by drip irrigation, lawns are limited to 16,456 sq ft and watered by sprinklers, tree basins are mulched, and the landscape draws on harvested rainwater and wastewater from the water-treatment tanks.

1. Choosing Plants That Need Less Water

The first step in water-conscious landscaping is to choose plants that can survive on little water, and the plantation record shows that the university has done this on a large scale. The planting is dominated by robust, flowering shrubs and ground covers, which together make up 29,118 plants (84.2 per cent).

Drought tolerance	Number of Plants	Share (%)
Drought tolerant	20,728	59.9
Moderately drought tolerant	2,721	7.9
Not drought tolerant	11,128	32.2
Total	**34,577**	**100**

Category	Number of Plant Species	Total Quantity of Plants
Drought-tolerant plants	29	20,728
Native plants	18	4,991
Both native and drought-tolerant plants	8	4,150

Plant type	Number of Plants	Share (%)
Shrubs	17,918	51.8
Ground covers	11,200	32.4
Trees	4,899	14.2
Mexican grass	500	1.4
Creepers	60	0.2
Total	**34,577**	**100**

Bougainvillea is the main choice. The record shows 10,750 bougainvillea plants in pink, white and mixed varieties, which is 31.1 per cent of all plants and more than half (51.9 per cent) of everything rated drought tolerant. They were planted at the gate

entrances, between Gate 2 and Gate 4, in the administrative and academic area, and, in the largest single planting of July 2025, along both sides of the road from Gate 3 to Gate 2, where 6,000 bougainvillea in pink and white were set out.

Other drought-tolerant plantings include 3,800 barleria, 2,300 dwarf nerium (oleander), 2,000 golden duranta and duranta, 650 leucophyllum, 400 excoecaria bicolor, 250 jatropha, 150 pandanus and 100 lantanas. Drought-tolerant trees include 90 Bauhinia purpurea, 50 gulmohar, 50 drumstick, 23 Cassia javanica and 10 Cassia fistula. Among the 549 trees other than areca palm, 403 (73 per cent) are rated drought tolerant or moderately so.

The university also favours species native to the region. 4,991 plants (14.4 per cent) are native, including 3,800 barleria, 250 Murraya paniculata, 150 pandanus, 90 Bauhinia purpurea, 50 drumstick and 50 kadamba, and 4,150 plants are both native and drought tolerant. Native plants are adapted to local rainfall and need less supplementary water once established.



Figure 1. Drought-tolerant planting: pink bougainvillea



Figure 2. Drought-tolerant planting: golden duranta hedge



Figure 3. Pandanas planted in the campus beds



Figure 4. Duranta repens planted in the campus beds

2. Where and When the Planting Was Done

The planting has been a steady programme rather than a single event. The share of drought-tolerant plants was high in the recent years: 5,290 of the 6,855 plants in 2024 (77 per cent) and 6,250 of the 10,000 in 2025 (62.5 per cent).

Year	Number of Plants planted
2022	8,074
2023	9,648
2024	6,855
2025	10,000
Total	**34,577**

The plants are spread across the campus. The administrative and academic area received the most, followed by the Gate 3 to Gate 2 road and the academic building surroundings.

Area	Number of Plants
Administrative and academic area	9,200
Gate 3 to Gate 2 road	9,000
Academic building surroundings	6,466
Gate 2 to Gate 4 road	2,000
Avenue road	1,750
Kitchen garden	1,045
Basketball court area	800
SR Block courtyard	600
Road from Vedavathi to the gate	500

The towers also have plantings. Lawns are kept to a limited area. The record shows 16,456 sq ft of grass laid, made up of 10,000 sq ft of shade grass and 6,456 sq ft of carpet grass, behind the canteen and in an adjoining yard area. This is about 1,529 m², so lawn is kept to a limited part of the landscape.

3. Efficient Irrigation

Drip irrigation

The beds, palm plantings and young fruit trees are watered by drip irrigation. Black drip tubing runs along the shrub beds beside the walkways, through the beds of areca palms, and next to newly planted fruit trees. Drip irrigation delivers water slowly, at the base of each plant, so that it soaks into the root zone instead of running off or evaporating, and it typically uses far less water than watering by hose or flooding.



Figure 5. Drip irrigation tubing laid along a shrub bed beside the walkway



Figure 6. Drip irrigation tubing through a bed of areca palms



Figure 7. Drip irrigation beside a young fruit tree

Individual outlet stakes are also fitted at the base of shrubs and at the foot of palm trunks, delivering water at the plant itself.



Figure 8. Irrigation outlet stake at the base of a shrub the base of a shrub



Figure 9. Irrigation outlet stake at the foot of palm trunk



Figure 10. Irrigation outlet stakes at the base of palm trees

Sprinklers for lawns

The lawns are watered by sprinklers set into the grass, which spread water evenly over the grass area. The photographs show a sprinkler operating in the lawn beside

the walkway. Because lawn area is limited to 16,456 sq. ft, the volume of water used on grass is kept small.



Figure 11. Sprinkler operating in the campus lawn



12. Sprinklers watering the lawn the campus lawn beside the campus walkway

Mulching

Tree basins are covered with a layer of dry mulch. Mulch shades the soil, reduces evaporation and keeps the roots cooler, so that each watering lasts longer. Mulched basins can be seen at the Cassia fistula and at the young tree in the photographs.



Figure 13. Mulched basin at the foot of a young tree



Figure 14. Mulched basin at the Cassia fistula

4. Rainwater and Reused Water for the Landscape

The university uses water from sources other than its fresh supply, so that the landscape does not depend on drinking-quality water. It has 11 rainwater harvesting systems with a combined capacity of 22 m^3. Roof water is collected through a piping system and brought to harvesting pits close to each building, and the building run-off passes through pits located at each building. The harvested water is used to increase the groundwater level, as recorded in the audit, so that rain falling on the campus stays in the local water cycle. Run-off from common areas and roads is collected and routed to a nearby water body.



Figure 15. Rainwater collecting pit in the grass-paved area of the campus

Wastewater is also used in the garden. The audit records that wastewater from the water-treatment tanks is directed to the garden, including the tank serving the Annapurna Mess and the tank in the CV Raman Block basement, while the rest goes to the sewage treatment plant. The Biopipe sewage treatment plant works without chemicals and produces treated water that is suitable for reuse in irrigation, flushing and other non-potable uses. In addition, food waste and fallen leaves are turned into vermicompost, which the gardening team uses as manure for the plants, returning nutrients to the soil.

5. Fruit and Kitchen Garden Planting

Fruit trees in the kitchen garden are also largely chosen for their tolerance of dry conditions. The young trees are fitted with name plates and protective guards. The plantation record also lists grapes, mosambi, coconut and avocado.

Fruit tree	Trees	Drought rating
Mango	40	Drought tolerant
Sapota	25	Drought tolerant
Custard apple	25	Drought tolerant
Apple ber	10	Drought tolerant
Fig	5	Drought tolerant
Drumstick	50	Drought tolerant
Jackfruit	20	Moderate
Lemon	25	Moderate
Mosambi	15	Moderate



Figure 16. Mango tree with name plate



Figure 17. Sapota tree with name plate



Figure 18. Pomegranate planted on the campus

SRM UNIVERSITY – AP PLANTS LIST

S. No	Date	PO NO	Name of the plant/trees	Drought tolerant	Native	Type of the Plants	Qty	Area of plantation
1	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Jack fruit	Moderate	Yes	Trees	20	Kitchen garden
2	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Sapota	Yes	No	Trees	25	Kitchen garden
3	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Mango	Yes	Yes	Trees	40	Kitchen garden
4	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Lemon	Moderate	No	Trees	25	Kitchen garden
5	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	coconuts hybrid	No	Yes	Trees	15	Kitchen garden
6	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Grapes	Moderate	No	Creeper	10	Kitchen garden
7	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Mosambi	Moderate	No	Trees	15	Kitchen garden
8	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Fig	Yes	No	Trees	5	Kitchen garden
9	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Apple Ber	Yes	Yes	Trees	10	Kitchen garden
10	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Avocado	No	No	Trees	5	Kitchen garden

S. No	Date	PO NO	Name of the plant/trees	Drought tolerant	Native	Type of the Plants	Qty	Area of plantation
11	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Custard apple	Yes	No	Trees	25	Kitchen garden
12	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Syzygium	Moderate	Yes	Shrubs	16	Academic building
13	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Leucophyllum	Yes	No	Shrubs	100	Academic building
14	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Areca palm	No	No	Trees	100	Canteen front side
15	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Mexican carpet grass (srmtrs)	No	No	Mexican grass	500	Academic building
16	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Mussaenda	No	No	Shrubs	10	Canteen front side
17	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Pandanus	Yes	Yes	Shrubs	150	Academic building
18	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Ixora chinesis	No	No	Shrubs	100	Academic building
19	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Lantana purple	Yes	No	Ground Covers	100	Academic building
20	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Excoecaria bicolor	Yes	No	Shrubs	400	Tower1
21	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Cassia fistula	Yes	Yes	Trees	10	Tower2
22	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Bougainvillea pink	Yes	No	Shrubs	250	gate3 entrance
23	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Gardenia jasminoides	No	No	Shrubs	100	tower3

S. No	Date	PO NO	Name of the plant/trees	Drought tolerant	Native	Type of the Plants	Qty	Area of plantation
24	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Licuala grandis	No	No	Shrubs	25	tower2&3
25	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Tabernaemontana	No	Yes	Shrubs	100	tower3&5
26	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Heliconia psittacorum	No	No	Trees	76	tower2
27	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Golden Cyperus	No	No	Shrubs	22	towers between area
28	22.01.2022	GPEMC/AP/O&M/22-23.PO 0116	Barleria	Yes	Yes	Ground Covers	300	tree court area
29	14.07.2022	GPEMC/AP/O&M/22-23.PO 072	Golden Thuja	Moderate	No	Shrubs	20	towers between area
30	14.07.2022	GPEMC/AP/O&M/22-23.PO 072	Nerium Dwarf	Yes	No	Shrubs	1500	Academic building
31	14.07.2022	GPEMC/AP/O&M/22-23.PO 072	Ipomoea green & brown	No	No	Ground Covers	4000	Academic building
32	27.03.2023	GPEMC/AP/O&M/22-23.PO 0300	Cassia javanica	Yes	No	Trees	23	towers between area
33	27.03.2023	GPEMC/AP/O&M/22-23.PO 0300	Lotus	No	Yes	Shrubs	75	lotus Pond area
34	27.09.2023	GPEMC/AP/O&M/22-23.PO 0116	potonia	No	No	Ground Covers	1000	Fountain area
35	03.09.2023	GPEMC/AP/O&M/22-23.PO 0116	Malpighia	Moderate	No	Shrubs	2300	Admin and Academic
36	03.09.2023	GPEMC/AP/O&M/22-23.PO 0116	Barleria	Yes	Yes	Ground Covers	3500	Admin and Academic

S. No	Date	PO NO	Name of the plant/trees	Drought tolerant	Native	Type of the Plants	Qty	Area of plantation
37	03.09.2023	GPEMC/AP/O&M/22-23.PO 0116	Leucophyllum	Yes	No	Shrubs	250	Admin and Academic
38	03.09.2023	GPEMC/AP/O&M/22-23.PO 0116	Bougainvillea pink	Yes	No	Shrubs	1250	Admin and Academic
39	03.09.2023	GPEMC/AP/O&M/22-23.PO 0116	Bougainvillea white	Yes	No	Shrubs	1250	Admin and Academic
40	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Grapes seedless	Moderate	No	Creeper	50	Kitchen garden
41	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Murraya paniculata	Moderate	Yes	Shrubs	250	Kitchen garden
42	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Duranta	Yes	No	Ground Covers	250	Kitchen garden
43	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Jatropha	Yes	No	Shrubs	250	Kitchen garden
44	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Bauhinia purpurea	Yes	Yes	Trees	90	Buffer zone area
45	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Millingtonia	Moderate	Yes	Trees	15	tower3 back side
46	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Drumsticks	Yes	Yes	Trees	50	Kitchen garden
47	05.07.2024	PO-HPL24-25/302	Areca palm	No	No	Trees	300	Admin and Academic
48	05.07.2024	PO-HPL24-25/302	Kadamba	No	Yes	Trees	50	Admin and Academic
49	05.07.2024	PO-HPL24-25/302	Gulmohar	Yes	No	Trees	50	Reservoir
50	05.08.2024	PO-HPL24-25/404	Areca palm	No	No	Trees	300	Admin and Academic
51	05.08.2024	PO-HPL24-25/404	Heliconia green	No	No	Shrubs	200	SR block courtyard
52	05.08.2024	PO-HPL24-25/404	Heliconia variegated	No	No	Shrubs	200	SR block courtyard

S. No	Date	PO NO	Name of the plant/trees	Drought tolerant	Native	Type of the Plants	Qty	Area of plantation
53	05.08.2024	PO-HPL24-25/404	Ixora drawf	No	Yes	Ground Covers	200	SR block courtyard
54	05.08.2024	PO-HPL24-25/404	Golden duranta	Yes	No	Ground Covers	1500	Avenue road
55	05.08.2024	PO-HPL24-25/404	Leucophyllum	Yes	No	Shrubs	300	SR block
56	05.08.2024	PO-HPL24-25/404	Nerium dwarf	Yes	No	Shrubs	800	Basketball court area
57	29.08.2024	VSR Nursery	Bougainvillea	Yes	No	Shrubs	2000	Gate2 to gate4
58	26.02.2025	PO-HPL24-25/1208	Areca palms	No	No	Trees	150	Potted plantation
59	26.02.2025	PO-HPL24-25/1208	Golden duranta	Yes	No	Ground Covers	250	Avenue road
60	26.02.2025	PO-HPL24-25/1208	Ixora dwarf	No	Yes	Ground Covers	100	X Lab
61	04.03.2025	PO-HPL24-25/1216	Areca palm	No	No	Trees	500	Vedavathi to Gate Road, Avenue Road
62	31.07.2025	PO-HPL25-26/486	Areca palm	No	No	Trees	3000	Gate3 to Gate2 road Both side
63	31.07.2025	PO-HPL25-26/486	Bougainvillea Pink & White	Yes	No	Shrubs	6000	Gate3 to Gate2 road Both side
	Total plants and trees						**34577**	
47	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Shade grass				10000	(SFT)Canteen backside
48	10.05.2024	SRMGHPL/AP/24-25/WO no.039	Carpet grass				6456	(SFT)Canteen backside, switch yard area
	Total Grass Laying in SFT						**16456**	