CENTRAL INSTITUTE OF HORTICULTURE
ANNUAL ACTION PLAN 2022-2023

Sl.	Components	Physical Targets	Approx. cost per unit (Rs. in lakh)	Approx. Financial Allocation (Rs. in lakh)
1	**SALARIES**			**15.00**
2	**WAGES** (Labour, Security persons & Contingent staffs)			**108.70**
3	**MEDICAL**			**5.00**
4	**DOMESTIC TRAVEL EXPENSES**			**1.00**
5	**OFFICE EXPENSES**			
a)	Office furniture (New Farmers Hostel)			6.00
b)	Telephone bill & internet charges			1.00
c)	Electricity bill/ Gas/ Water			2.00
d)	Repair/servicing of motor vehicle, farm tools & implements, generator and repairing of water distillation unit for laboratory use			6.00
e)	Purchase of rubber stamp			0.10
f)	Stationary			1.00
g)	Office equipment			1.00
h)	Computer & accessories			1.00
i)	Printing & binding jobs			1.00
j)	POL			5.00
k)	AMC/ Repair of computer,printers& other office equipments			2.00
l)	Postage & Telegraph			1.00
m)	Misc./others			2.90
	Sub total			**30.00**
6	**RATE, RENT & TAXES**			**1.00**
7	**PUBLICATION**		**Annexure I**	
a)	Annual Report 2021– 2022	1 No.		
b)	Technical bulletin	1 No.		
c)	Folders	5 Nos.		
d)	Reprinting of exhausted Technical folders	10 Nos.		
e)	Procurements of books and journals			
	Sub total			**4.50**
8	**OTHER ADMINISTRATIVE EXPENSES**			
	A. Human Resource Development B. Seminar/Workshop/Conference/Meeting C. Post Harvest Management D. Marketing & Agri-Business Promotion E. Furnishing of Farmers Hostel			

Mr. Prabeer Mudgal

8.A.	**HUMAN RESOURCE DEVELOPMENT**			
i)	Farmers training	30 nos.(50 trainees/batch	0.50 **Annexure -II A**	15.00
ii)	Training of extension functioneries/officers	01 nos. (40 trainees/batch	2.0 **Annexure -II B**	2.00
iii)	Exposure visit cum training of farmers	01 nos.	3.20 **Annexure -II C**	3.20
iv)	Capacity building of staffs (As per actuals)			1.30
v)	**Skill development trainings**			
a)	Gardener (200hrs)	02 no.	2.00	4.00
b)	Floriculturist-Protected cultivation (200 hrs)	01no.	2.00	2.00
	Sub total			**27.50**
8.B.	**Seminar/Workshop/Conference/Meeting**			
i)	Conference/Workshop (National level)	1no.	3.00	3.00
ii)	Technical Advisory Committee Meeting	1 no	1.00	1.00
iii)	Board of Management Meeting	1 no	1.00	1.00
iv)	Workshop on digital marketing of horticulture crops	1 no.	1.00	1.00
	Sub total			**6.00**
8.C.	**POST HARVEST MANAGEMENT**			
i)	Protocol development and delopment of value added products amongst the unemployed youths (2 groups)	02 trainings with 20 members per group	0.20	0.40
ii)	One day field day on food processing for rural women	01 day for 50 rural women	0.50	0.50
iii)	03 days programme on post harvest management and processing of horticulture crops	4 trainings with 20 members per group	0.20	0.80
iv)	01 day awareness programme on post harvest handling, processing and packaging of horticulture crops	1 training with 50 members per group	0.50	0.50
v)	Standardization of protocols for dehydrated products using solar drier		0.50	0.50
vi)	Development of value added products from oyster mushroom		0.30	0.30
	Sub total			**3.00**

8.D.	**MARKETING & AGRI-BUSINESS PROMOTION**			
8.D.i	**Market linkage**			
a)	Facilitation in market linkage of horticultural crops	02 crops	0.50	1.00
b)	Program on supply chain management & marketing strategies of horticulture crops	1no.	1.00	1.00
8.D.ii	**FPOs/FPCs/Agri-Start-ups**			
a)	Training to FPOs/ FPCs on marketing and value creation	1	0.5	0.50
b)	Promotion & facilitation for agri-start ups (training on business development)	1	0.5	0.50
c)	Training on agricultural marketing in NE states to extension officers (3 days)	1	1.5	1.50
d)	Entrepreneurship development programme (3 days)	1	2	2.00
8.D.iii	Promotion of cluster based horticulture model (training, demonstration, skill development, post harvest management & market linkage)	2 clusters	1.00	2.00
	Sub total			**8.50**
8.E	Furnishing and installation of false ceiling of Dining hall and training hall in New Farmers Hostel		15.00	15.00
	Sub total of OAE			**60.00**
9	**ADVERTISEMENT & PUBLICITY**			**2.00**
10	**MINOR WORKS**			
a)	Construction of double door in poly house no. 12	1 no.	1.00	1.00
b)	Construction of RCC platform for citrus primary nursery PH Nos. 1&6	10 Nos. (31mx1mx2ft)	As per CPWD Estimate	10.00
c)	Construction of Shade net for Nursery unit as per MIDH norms	1 no. (500 sq m)	5.00	5.00
d)	Repair and renovation of Fan & Pad system in poly house 6&7	2 unit	2.50	5.00
e)	Repair and maintenance of bamboo guest house including repairing of bamboo guest house front CGI steel roof damaged during solar panel installation.		**5.00**	**5.00**
f)	Construction of drainage in pump house area near Dairy unit		2.50	2.50
g)	Installation of 5KVA solar power plant at Administrative building			6.00

h)	Maintenance of Poly houses & installation of thermostat system in all the poly houses for maintaining of temperature	12000sqm 12nos poly houses		7.00
i)	Repair of existing farm road (lane-3)			5.00
j)	Other minor works			3.10
	Sub total of Minor works			**49.60**
11	**PROFESSIONAL SERVICES**			
	A. Consultancy fees as per actual B. Professional fees as per actual C. Invigilator fees as per actual D. Legal fees as per actual			4.00
	Sub Total of Professional services			**4.00**
12	**OTHER CHARGES**			
	A. Management of existing demonstrations in the institute B. Demonstration of production technologies i. Demonstration of improved technologies in the institute ii. Demonstration of improved technologies in NE states C. Bee-keeping programme D. Production of quality planting material E. Accreditation of horticultural nurseries in NE Region F. Certificate course G. Exhibition/ trade fairs/ meets/ mela H. Farm development & beautification			
12.A	**MANAGEMENT OF EXISTING DEMONSTRATIONS IN THE INSTITUTE**			
a)	Maintenance of organic vermicompost	9 units	0.30	0.30
b)	Maintenance of mushroom unit	2 units	0.20	0.40
c)	Green manuring crop in fruit blocks	10ha	0.50	0.50
d)	Procurement of manures, fertilizer & chemical for farm & nursery units		**Annexure III**	5.00
e)	Procurement of manures, fertilizers & chemicals for protected cultivation (For 8 nos. (1000sm) & 04nos.(100sqm) poly houses)		**Annexure IV**	1.50
f)	Maintenance of tree spices		0.20	0.20
g)	Maintenance of herbal garden		0.20	0.20
h)	**Plantation of forage crops for dairy unit**		**0.25**	**0.25**
i)	Procurement of Cow feeds, immunization etc		1.50	1.50
	Sub total			**9.85**

12.B	**DEMONSTRATION OF PRODUCTION TECHNOLOGIES**			
i	**Demonstration of improved technologies in the institute**			
1)	i) Demonstration on Improved production technology in vegetables under rain shelter structures/ poly tunnel of vegetables (brinjal, capsicum, tomato, leafy vegetables) ii) Demonstration in cucurbits (bottle gourd & squash) iii) Assessment of cole& root crops such as cabbage , broccoli, knolkhol, carrot, beet root	0.30 ha	**Annexure V**	0.50
2)	Plantation of tuber crops (cassava, sweet potato &colocasia)	0.15 ha		0.20
3)	Cultivation of ginger var. Nadia & Local, turmeric var. Megha Turmeric-1 &Lakadong	700 sqm		0.20
4)	Plantation of Tree spices (Nutmeg, clove, curry leaf)	1000 sq m		0.50
5)	Promotion of herbal spices like Thyme, Basil, Oregano, Rosemary, saw tooth coriander etc	300 sqm		0.50
6)	Cultivation of garlic var. Local	700 sq m		0.20
7)	Demonstration on Improved production technology with special emphasis on INM in brinjal, cauliflower, Chinese cabbage (bok choy), knol-khol& carrot (ICAR, Barapani& AAU, Jorhat)	0.3ha		0.50
8)	Plantation of Pineapple on slopy land and along road in last block var Kew including poly mulch	D block 0.5 ha	0.50	0.50
9)	Gap filling of Custard apple var. ArkaSahan, Balanagar, Sapota var. Cricket ball, Avocado var. Pinkerton etc	E_3 block 0.25ha	0.50	0.50
10)	Establishment of Sweet Orange block	D block 0.5ha	0.50	0.50
11)	Establishment of seedless lemon and seedless lime	D block 0.25 ha	0.50	0.50
12)	Establishment of yellow fig cultivar from IIHR, Bangalore	E block 0.50 ha	0.50	0.50
13)	Introduction of Phalsa fruit as intercrops in fruit blocks	E block	0.50	0.50
14)	Establishment of Citrus macroptera	D block 0.25ha	0.50	0.50
15)	Establishment of star apple , custard apple,peach, Japanese plum& low chilling pear	E block 0.25ha	0.50	0.50

16)	Establishment of Durian, Datepalm, Jackfruit(Latex free cultivars from IIHR, Bangalore)	E block 0.25ha	0.50	0.50
17)	Performance of high value vegetables under protected cultivation (tomato & sweet pepper,Cucumber, Bitter gourd & Musk melon)	3000 sqm F1 Hybrid seeds	**Annexure VI**	0.50
18)	Setting up of low cost hydroponic unit	1 unit	2.00	2.00
19)	Establishment of floriculture nursery (indoor plants & flowering annuals/perennials)			1.00
20)	Introduction of new Anthurium cultivars			1.00
21)	Assessment of Bottle gourd local variety and Improved variety	0.20 sqm		0.20
22)	Effect of Essential Microorganism and inorganic nutrient source on growth and yield of Broccoli	0.20 sqm		0.20
23)	Effect of Essential Microorganism and inorganic nutrient source on growth and yield of Cabbage	0.20 sqm	**Annexure VI**	0.20
24)	Assessment of Papaya local variety and Improved variety (0.20 sqm)	0.20 sqm		0.20
25)	Assessment of Brinjal local variety and Improved variety (0.20 sqm)	0.20 sqm		0.20
26)	Impact of pruning in guava plants on growth, quality and yield in the Institute			0.05
27)	Demonstration on importance of Microgreens (beans, chickpea, amaranth, beet, broccoli etc)	05 sqm		0.20
28)	Integrated approach for Citrus trunk borer (Anoplophoraversteegi) management on rangpur lime.	0.5 ha		0.20
29)	Influence of Different Protected Conditions on Growth and Yield of Parthenocarpic Cucumber (Cucumis sativus) Hybrids	500 sqm		0.20
30)	General Comparative Study between an Open Field and Protected Cultivation of Tomato Cultivars under foothill condition of Nagaland.	1000 sqm		0.15
31)	Demonstration of marigold multiplication through cuttings	500nos.		0.05
	Sub total			**13.45**
B ii	**Demonstration of improved technologies in NE states**			
1)	**Management of existing demonstration**			
a)	Off farm demonstration on Integrated Horticulture Model in Punglwa B village under Peren district	0.5 ha		0.20

2	**New Demonstration of improved technologies in NE states**			
a)	Demonstration on plantation of litchi (6x6m)	1 ha	**Annexure VII**	0.44
b)	Demonstration on plantation of lime/lemon (3x3m)	1 ha		0.80
c)	Demonstration on plantation of Apple Ber (5x5m)	1ha		0.35
d)	Introduction of bee colonies (Apiscerana)	10 colonies		0.50
e)	Open field cultivation of Gerbera & Rose	500 nos. each	0.50	0.50
f)	Demonstration on Low cost gravity drip irrigation system (NCPAH technology)	0.25 ha		1.00
g)	Rejuvenation of declined orchards in Wokha& Kohima district of Nagaland	2 ha	0.40/ha as per MIDH norms	0.80
h)	Promotion of INM/IPM in Khasi Mandarin in Wokha& Kohima district of Nagaland	5 ha	0.04/ha as per MIDH norms	0.20
i)	Impact of pruning in guava plants on growth, quality and yield at Kohima district, Nagaland			0.06
	Sub total			**4.85**
12.C	**BEE KEEPING PROGRAMME**			**Subject to availability of funds from NBHM**
a)	Development of bee breeder			
b)	Technology demonstration on bee keeping			
c)	Training on bee keeping	05 nos.		
12.D	**PRODUCTION OF QUALITY PLANTING MATERIAL**			
a)	**Mass multiplication of quality planting material**			
i)	Asexually propagated plants (Cashew 20000, citrus10000, Assam Lemon 20000 , Acid Lime 30000, Mango 10000, Guava 10000, Dragon fruit 2000, Litchi 1000,Tree spices—2000, etc.)	1,00,000 nos	**Annexure VIII**	3.00
ii)	Production of flowers seedling/potted plants through seeds	5000nos.	0.50	0.50
iii)	Production of potted plants/ vegetable seedlings	5,000 nos.	1.00	1.00
	Sub total			**4.50**

12.E	**ACCREDITATION OF HORTICULTURAL NURSERIES IN NER**			
i)	Accreditation & certification of horticultural nurseries in North East Region	15 nos.	As per NHB guidelines	**8.00**
12.F	**CERTIFICATE COURSE**			
i)	Certificate course on post harvest Management and Value addition of Horticultural crops (3 months Duration)	1 no.	**Annexure IX**	**5.00**
12.G	**EXHIBITION/ TRADE FAIRS/ MEETS/ MELA**			
i)	National/ State level exhibitions (To participate)	1 nos.	2.00	2.00
ii)	District level promotional event	1 nos.	1.50	1.50
	Sub total			**3.50**
12.H	**FARM DEVELOPMENT & BEAUTIFICATION**			
i)	**Landscaping infront of new farmers hostel building**		**1.00**	**1.00**
ii)	Purchase of flower pots and flowering annuals/ perennials for farm beautification			0.50
	Sub total			**1.50**
13	**CONTRACTUAL STAFF REMUNERATION**			**75.00**
	Sub total of OC			**125.65**
14	**SWACHHTA ACTION PLAN**			**2.00**
	Sub total of Revenue			**408.45**
15	**MAJOR HEAD**			
A	**Machinery &Equipment**			
i)	**Purchase of farm tools and implements** (Spade, tool box, gum boots, hammer, hand gloves, buckets, garden hose, plastic crates, disc plough, power weeder, mini rotary tiller etc.)			30.00
	Sub total			**30.00**
B	**Major works**			
i)	**Construction of Residential Staff quarter building**	**Type-III-5nos. & IV-4nos.**		**120.00**
ii)	Construction of brick wall in the existing barbed wire boundary (Near to terrace area, Pump house)	0.5 KM		100.00
iii)	Construction of Farmers Hostel 1st& 2nd floor			100.00

iv)	Construction of Security room with toilet near to pump house		As per CPWD Estimate	25.00
v)	Renovation & extension of existing pump house		As per CPWD Estimate	30.00
vi)	Construction of water harvesting structure at CIH (Near to 4nos. of poly house)	1.00 Lakh liter capacity	As per CPWD Estimate	25.00
	Sub total			**400.00**
	Sub total of Major Head			**430.00**
	GRAND TOTAL OF REVENUE & MAJOR HEAD			**838.45**

HEAD WISE BUDGET OF CENTRAL INSTITUTE OF HORTICULTURE, NAGALAND FOR THE YEAR 2022-23

550501-Salaries	15.00
550502-Wages	108.70
550506-Medical Treatment	5.00
550511-Domestic Travel Expenses	1.00
550513-Office Expenses	30.00
550514-Rent, Rates & Taxes	1.00
550516-Publication	4.50
550520-Other Administrative Expenses	60.00
550526-Advertisement & Publicity	2.00
550527-Minor Works	49.60
550528-Professional Services	4.00
550550-Other Charges	125.65
5596-Swachhta Action Plan	2.00
Total	**408.45**
Major Head	
160152-Machinery & Equipment	30.00
160153-Major Works	400.00
Total	**430.00**
Grand Total	**838.45**

Annexure- I

7. PUBLICATION

Sl. No.	Type of Publication	Particulars	Items	Copies	Approx. rate (lakh)
1.	Annual report 2021-22	Multicolor, A4 size, art paper, 70 pages	1 no.	150	2.00
2.	Folders	Multicolor, 1/3 size, 6 pages	5 nos.	500	0.50
3.	Technical Bulletin	Multicolor, A4 size, art paper, 30 pages	1 nos.	500	1.00
4.	Reprinting of exhausted folders	Multicolor, 1/3 size, 6 pages	10 nos.	500	0.50
5.	Procurement of books & Subscription of journals for library				0.50
				Total	**4.50**

Annexure- II-A

8.A. HUMAN RESOURCE DEVELOPMENT

(a) Proposed topic for **Farmers Training** (30nos.)

Sl. No.	Topics	Remarks
1	Entrepreneurship Development Through Floriculture	Each training is conducted within the cost norms of MIDH as mentioned below
2	Mushroom Cultivation for Additional Income	
3	Organic Vegetable Production in Abandoned Jhum Fields.	
4	Post Harvest Processing and Value Addition of Underutilized Fruits and Vegetables in Northeast India	
5	Orchard Management and Rejuvenation of Old and Senile Orchards	
6	Nursery Management and Propagation Techniques of Focus Fruit Crop in NE Region	
7	Protected Cultivation Technology for Exotic Horticulture Crops	
8	Integrated Approach for Enhancing Productivity in Horticulture Crops	
9	Packaging, Branding and Marketing Skill in Horticultural crops	
10	Awareness of Scheme and Credit available	

Budget for Farmers training

Sl. No.	Particulars (As per MIDH Norms)	Approx. Cost (Rs. In lakhs)
1	a)Within the State Conduct of training (working lunch/ refreshment/ training kits/ honorarium/ conference hall/ including transport/TA of participants etc.) @Rs. 1000/person/day (as per norms) for 50 nos. x 1 day	0.50
	b) Outside the State Project based as per actual. 100% of the cost.	-----
	i.e. Rs. 0.50 lakh/ training = Rs. 0.50 lakh x 30 trainings	**15.00**

Annexure- II-B

b) Proposed Topics for Training of Trainers (1 No.)

Sl.	Topics
1.	Orchard Management and Production Technology of Focus Horticulture Crops
2.	Production Technology & Post Harvest Management of Focus Crops
3.	Organic Farming & Certification of Horticulture Crops
4.	Packaging, Branding and Marketing Skill in horticultural crops
5.	Hi-Tech methods for raising nursery of Vegetable/Flower Crops
6.	Production of quality planting material & accreditation of nursery of focus Fruit Crops
7.	Supply Chain and Marketing of Horticultural Crops

Budget for Training of Trainers (TOT)

Sl. No	Particulars(As per MIDH Norms)	Approx. Cost (Rs. In lakhs)
	a)Within the State	
1	Conduct of training (Refreshment/ honorarium/ conference hall etc.) @Rs. 200/person/day (as per norms) for 40 nos x 3 days	0.20
2	DA of participants (food & lodging) approx. as per admissible @ Rs. 500 x 40 x 3 days as admissible	0.60
3	TA of participants (to be paid as admissible) Approx. @Rs. 1500 x 40 nos.	0.60
4	TA/ DA of resource persons (to be paid at actual as per norms)	0.40
5	Vehicle hiring (for field trips & local conveyance during training)	0.20
	Sub Total	2.00
	b) Outside the State Project based as per actual. 100% of the cost.	-----
	i.e. Rs. 2.00 lakh/ training = Rs.2.00 lakh x 1 trainings)	**2.00**

Annexure- II-C

c) Budget for Exposure trip cum training (1 no)

Sl. No	Particulars(As per MIDH Norms)	Approx. Cost (Rs. In lakhs)
1	i) TA/DA @ Rs. 1000/day/person for 20 participants for 4 days (within the state)	0.80
	ii) Transport cost (approx.) Rs.4000x 20 person (as per actual)	0.80
	iii) Training charges/fooding/ lodging/(excluding transport)	1.60
	Sub Total	3.20
	a) Outside the State Project based as per actual. 100% of the cost.	---
	b) Outside India Rs. 4.00 lakh / participant Project Based. 100% of air/rail travel. Course fee cost to be funded under Mission Management.	---
	i.e. Rs. 3.20 lakh/ training x 1 no.	**3.20** (approx)

Annexure- III

12.A.MANAGEMENT OF EXISTING DEMONSTRATIONS IN THE INSTITUTE

d)Procurement of manures, fertilizer & chemical for farm & nursery units

PART-1

Sl. No	Particulars	Chemical composition/ specifications	Quantity in L/Kg	Rate (Rs.)	Amount (Rs.)
1	NPK 13:00:45	-	25 kg	200/kg	5000
2	NPK 19:19:19	-	25 kg	4465/25 kg	4465
3	Trichoderma	-	10 kg	200/kg	2000
4	Biofertilizers Azotobacter Phosphotika	-	10 kg 10 kg	120/kg 120/kg	1200 1200
5	Floramite	Bifenazate-22%	500 ml	2435/250 ml	4870
6	Account	Novaluron 5.25%+Indoxicarb 4.5%	1 L	1380/500 ml	2760
7	Neem oil	-	5 L	700/L	3500
8	Pheromone traps	-	100 nos		
9	Vermiculite	-	25 kg	250/kg	6250
10	Cocopeat	-	25 kg	100/kg	2500
11	Perlite	-	25 kg	150/kg	3250
12	FYM	-	3 truckload (250 cft/load)	8000/250 cft	24000
13	HDPE mulching sheet	400m	2 roll	4755/roll	9510
	Total				**70505**

PART-2

Sl. No	Particulars	Chemical composition	Quantity in L/Kg	Rate (Rs)	Amount (Rs)
1	FYM	-	20 truck load	8000/truck Load	160000
2	Urea (IFFCO)	-	20 bags	750/50 kg bag	15000
3	M.O.P (IPL)	-	20 bags	1500/50 kg bag	30000
4	S.S.P (IPL)	-	20 bags	830/50kg bag	16600
5	D.A.P (IFFCO)	-	40 bags	2350/50kg bag	94000
6	Micronutrient	-	15pkts	508/250 ml pkt	7620
7	NPK 19:19:19	-	75 kg	80/ kg	6000
8	Calcium Nitrate	-	50 kg	130/kg	6500
9	Biozyme	-	10lts	500/ltr	5000

10	Monocrotophos	-	8ltr	200/250 ml pkt	6400
11	Neem Gold	-	15ltr	157/250 ml pkt	9420
12	Rogor	Dimethoate	8 ltr	1000/ltr	8000
13	Furadan/Phorate -10g	-	150 kg	130/kg	19500
14	Metacid	Methyl Parathion	2ltr	1500/l	3000
15	Confidor	-	3ltr	2000/ltr	6000
16	Chloropyriphos	-	10ltr	1200/ltr	12000
17	Bavestine	Carbandezim	10 kg	1000/kg	10000
18	Diathen M-45	Mancozeb	10 kg	800/kg	8000
19	Redomil	Mencozeb+Metal axyle-M	6 kg	1800/kg	8000
20	Benomyle	Fundazol	4 kg	2000/kg	8000
21	glyphosate	-	20L	800/L	16000
Total					**455040**

Total of Part 1 & 2 = Rs. 70505 + 455040 = Rs. 525545.00 (Say Rs. 500000.00)

Proposed budget for manures, fertilizer & chemical for farm & nursery units for the year 2022-23 = Rs. 500000.00

Annexure-IV

12.A. MANAGEMENT OF EXISTING DEMONSTRATIONS IN THE INSTITUTE

e) Procurement of manures, fertilizers & chemicals for protected cultivation (For 8 nos. (1000sm) & 04nos.(100sqm) poly houses)

Sl. No.	Name of fertilizer an chemical	Quantity (liters/kg)	Rate(Rs)	Amount(Rs)
1.	Topaz (triazole)	2	1200/l	2400
2.	Score (Difenconazole25%EC)	3	1000/l	3000
3.	Redomil (Mencozeb+Metalaxyle-M)	2	1800/kg	3600
4.	Diathen M-45(Mancozeb)	4	800/kg	3200
5.	Bavestine (Carbandezim)	3	1000/kg	3000
6.	Quantinal	3	1500/kg	4500
7.	Benomyle(Fundazol)	2	2000/kg	4000
8.	Alitete (Fosetyle)	2	1900/kg	3800
9.	Captaf(ethylmercaptan)	3	800/kg	2400
10.	Rogor (Dimethoate)	3	1000/kg	3000
11.	Actara (Thiamethoxam)	3	1000/l	3000
12.	Karathane (Dinocap)	3	1100/l	3300
13.	Dantop (Clothianidin)	4	1000/l	4000
14.	Biozyme (seeweed based)	8	500/l	4000
15.	Metacid (Methyl Parathion)	2	1500/l	3000
16.	Cal MB Cypermethri	4	1400/l	5600
17.	Calcium Nitrate	50	130/kg	6500
18.	Potassium Nitrate	50	160/kg	8000
19.	Mangnicium sulphate	50	50/kg	2500
20.	Poatassium Sulphate	50	160/kg	8000
21.	Mono ammonium sulphate	50	150/kg	7500
22.	Zinc Suphate	25	200/kg	2500
23.	NPK (0:52:34)	40	150/kg	6000
24.	NPK (13:00:45)	40	150/kg	6000
25.	MagniciumNityrate	40	80/kg	3200
26.	NPK (19all)	50	80/kg	4000
27.	FYM	5nos.	8000/ Truck load	40000
28.		**Total Rs.**		**1,50,000.00**

Proposed budget required for manures, fertilizers & chemicals for protected cultivation for the year 2022-23: **Rs. 150000.00**

Annexure –V

12.B.DEMONSTRATION OF PRODUCTION TECHNOLOGIES

ii. Demonstration of improved technologies in the institute

Sl.no	Particulars
1	Improved production technology in summer/rainy season vegetables under rain shelter structures/ poly tunnel (brinjal, chilli, tomato, okra, cowpea, yardlong bean, bottle gourd) (0.30 ha) ICAR, Barapani/ AAU, Jorhat technology to be followed for the cultivation practices. Objective: • To exhibit the performance of cultivar through their qualitative and quantitative characteristics at different time of planting • To compare the performance of different organic and inorganic manures on growth and yield characteristics Parameters to be recorded: Germination %, Days taken for germination, Days to 1st flowering, Plant ht. (cm), No. of leaves/ plant, Pod length (cm), Pod wt. (g), No. of seeds/ pod, No. of pods/ plant, Pod wt. (5 nos/ plant), Pod yield / plant, Pod yield / plot, Total yield (kg/ha) Bottle gourd: Length of main vine (cm), Length of internode (cm), Number of branches/ plant, Number of nodes on main vine, Number of fruits per plant Average fruit weight (g) Fruit length (cm) Fruit diameter (cm), TSS (^{0}Brix), Ascorbic acid content (mg/100 g of dried flesh of fruit), Fruit yield / plan t (kg), Fruit yield/ plot (kg), Total yield (t/ ha)
2	Improved production technology in cabbage and broccoli (0.30 ha) ICAR, Barapani/ AAU, Jorhat technology to be followed for the cultivation practices. Objective: • To exhibit the performance of cultivar through their qualitative and quantitative characteristics at different time of planting • To compare the performance of different varieties, organic & inorganic manures on growth and yield characteristics Parameters to be recorded: Plant height (cm), Number of leaves per plant, Stalk length (cm), Days to first curd initiation (days), Days to 50% curd initiation (days), Days to 50% curd maturity (days), Curd maturity duration (days), Curd length (cm), Curd diameter (cm), Curd compactness (very compact, compact, medium compact and loose), Gross plant weight (g), Curd weight (g), Yield per plot (kg), Yield (q/ha), B:C ratio
3	Improved production technology in garlic Objective: • To study the effect of integrated nutrient management on growth, yield and quality of garlic.

	• To study the effect of INM on dry matter production and uptake of nitrogen, phosphorous and potassium Parameters to be recorded:Plant height (cm), Number of leaves per plant, Neck thickness of bulb (cm), Fresh weight of bulb (g), Diameter of bulb (cm), Length of bulb (cm), No. of cloves per bulb, Length of clove (cm), Root length (cm), Bulb yield/ plot (kg), Bulb yield/ ha (kg), NPK
4	Improved production technology in ginger var. Nadia & Local ICAR/ AAU technology to be followed for the cultivation practices. Objective: To investigate the comparative effect of organic & inorganic manures, and biofertilizers and their different combinations on growth, yield and quality and uptake of ginger crop. Parameters to be recorded: Plant height (cm), number of leaves/plants, number of tillers/clumps and leaf size, length of rhizome finger (cm), diameter of rhizome finger (cm) and yield of fresh and cured ginger (kg/ha). Improved production technology in Turmeric var. Megha Turmeric-1 &Lakadong Objective: • To study the influence of inorganic, organic and bio fertilizers in various combinations on the growth, yield, physiological and quality parameters of turmeric. Parameters to be recorded:Plant height (cm), No. of leaves, No of clumps, Fresh wt. of rhizome /plant, Dry wt. of rhizome /plant, Yield (kg/ha), Cucurmin content (%).
5	Improved production technology in colocasia var. Local Objective: • To study the effect of nutrient on growth and yield attributing traits in Colocasia. • To study the effect of organic and inorganic nutrients on quality of Colocasia. Parameters to be recorded: Plant height (cm), Number of tiller per plant, Number of main cormels per plant, Weight of main cormels per plant, Number of side cormels per plant, Weight of side cormels per plant, Weight of corm per plant, Total tuber weight per plant (gm), Total tuber yield (tonnes/ha)
6	Effect of organic and inorganic nutrient source on growth and yield of Brinjal var Megha Brinjal-1 (0.05 ha) ICAR/ AAU technology to be followed for the cultivation practices. Objective: • To assess the individual and combined effect of NPK, FYM and VC on growth and yield of brinjal • To find out the best treatment for maximizing the fruit yield of brinjal Parameters to be recorded: Germination %, Days taken for germinate, Days to 1st flowering, Plant ht. (cm), Fruit length (cm), Fruit wt. (g), No. of fruits/ plant, Dry fruit wt. (5 nos. / plant), Fresh fruit wt. (5 nos/ plant), Fruit yield / plant, Fruit yield / plot, Total yield (kg/ha).

Particulars	Quantity	Rate (Rs.)	Amount (Rs.)

	i)	Brinjal seeds	30 g	70/10 g	210.00
	ii)	Bio fertilizer (Azotobacter + phosphotika)	6 kg	30	180.00
	iii)	Bioagents (trichoderma)	2 kg	80	160.00
	i)	FYM	½ truck load	3500	3500.00
		Total			4050.00

7 Effect of organic and inorganic nutrient source on growth and yield of cauliflower (0.10 ha)

Objective:

- To study the effect of organic and inorganic source on nutrient and their combined effect on growth and yield of cauliflower.
- To determine the organic and inorganic sources of nutrient on quality of cauliflower.

Parameters to be recorded: Plant height (cm), Number of leaves per plant, Stalk length (cm), Days to first curd initiation (days), Days to 50% curd initiation (days), Days to 50% curd maturity (days), Curd maturity duration (days), Curd length (cm), Curd diameter (cm), Curd compactness (very compact, compact, medium compact and loose), Gross plant weight (g), Curd weight (g), Yield per plot (kg), Yield (q/ha), B:C ratio

Particulars		Quantity	Rate(Rs.)	Amount (Rs.)
i)	Seeds	50 g	780/10 g	3900.00
ii)	Bio fertilizer (Azotobacter + phosphotika)	10 kg	30	300.00
iii)	Bioagents (trichoderma)	3 kg	80	240.00
iv)	FYM	½ truck load	3500	3500.00
	Total			7940.00

8 Effect of organic and inorganic nutrient source on growth and yield of Chinese cabbage (0.10 ha)

Objective:

- To study the performance of Chinese cabbage crop at varying treatments combinations of organic and inorganic fertilizer in respect of growth, yield, nutrient uptake and quality of Chinese cabbage crop.

Parameters to be recorded: Germination %, Days taken for germination, Plant height (cm), Stalk girth (cm), Days to 50% head initiation (days), Days to 50% head maturity (days), Diameter of head (cm), Fresh weight of head/plant (g), Yield (kg), B:C ratio

Particulars		Quantity	Rate(Rs.)	Amount (Rs.)
i)	Seeds	50 g	400/10 g	2000.00
ii)	Bio fertilizer (Azotobacter + phosphotika)	10 kg	30	300.00
iii)	Bioagents (trichoderma)	3 kg	80	240.00
iv)	FYM	½ truck load	3500	3500.00
	Total			6040.00

9 Effect of organic and inorganic nutrient source on growth and yield of knolkhol var. White Vienna (0.05 ha)

Objective:

- To study the performance of varying treatments combinations of organic and inorganic fertilizer in respect of growth, yield and quality of knolkhol crop.

Parameters to be recorded: Plant height, number of leaf per plant, leaf area (cm^2), leaf weight (g), root length (cm) and root weight (g), Average diameter of knob (cm), Average knob weight (g), average dry weight of knob (g), yield per plot (kg), yield (q / ha)

Particulars	Quantity	Rate(Rs.)	Amount (Rs.)
i) Seeds	30 g	200/10 g	600.00
ii) Bio fertilizer (Azotobacter + phosphotika)	10 kg	30	300.00
iii) Bioagents (trichoderma)	3 kg	80	240.00
iv) FYM	½ truck load	3500	3500.00
Total			4640.00

10 Effect of organic and inorganic nutrient source on growth and yield of carrot var. PusaMeghali (0.05 ha)

Objective:

- To study the effect of organic and inorganic source on nutrient and their combined effect on growth, yield and quality of carrot.

Parameters to be recorded: Germination %, Days taken for germination, Plant height (cm), Number of leaves, Root length (cm), Root diameter (cm), Root weight (g), Root yield (kg/ha), Carotene content (mg /10g)

Particulars	Quantity	Rate(Rs.)	Amount (Rs.)
i) Seeds	30 g	200/10 g	600.00
ii) Bio fertilizer (Azotobacter + phosphotika)	10 kg	30	300.00
iii) Bioagents (trichoderma)	3 kg	80	240.00
iv) FYM	½ truck load	3500	3500.00
Total			4640.00

Annexure –VI

12.B.DEMONSTRATION OF PRODUCTION TECHNOLOGIES

r) Performance of high value vegetables under protected cultivation (tomato & sweet pepper, Cucumber, Bitter gourd & Musk melon)

(i). Seeds Material of Capsicum 40g @ Rs. 6000/10g Rs.24000.00
(ii). Seeds Material of Tomato(Indeterminate type 40g @ Rs. 1500/10g Rs.6000.00
(iii). Seeds Material of Cucumber(Klancvs.) 20g @ Rs.7000/10g Rs.14000.00
(iv). Seeds Material of Musk Melon20g @ Rs.1000/10g Rs. 2000.00
(v). Seeds Material of Bitter gourd-50gms@ Rs.1000/10gms Rs.5000.00
(vi). Staking material

Say Total Rs. **Rs.50,000.00**(FYM from the fertilizer head)

Sl.no	Particulars	Quantity	Rate (Rs.)	Amount (Rs.)
1	Impact of INM on growth and yield of Capsicum,Tomato, Musk Melon& cucumber each area (0.10 ha) ICAR/IARI/ AAU technology to be followed for the cultivation practices. Objective: To investigate the comparative effect of organic manures, synthetic fertilizers and biofertilizers and their different combinations on growth, yield and quality and uptake of vegetable crop. Parameters to be recorded: Plant height (cm), number of leaves/plants, number of braches and leaf size,no. of fruit per plant, fruit length (cm), diameter of fruit (cm) and yield of fruit per plant kg			
	Particulars	Quantity	Rate(Rs.)	Amount (Rs.)
	Planting material & inputs i) Seeds of Capsicum,Tomato,cucumber, bitter groud&Musk Melon	170g	--	50000.00
	Total Rs.			50,000.00

Annexure –VII

12. B-ii.DEMONSTRATION OF PRODUCTION TECHNOLOGIES

iii. Demonstration of improved technologies in NE states

(as per MIDH cost norms)

i) Demonstration on Plantation of Litchi (6x6m) in 1 hectare area.

Particular	Spacing	No of Plants/ha	Amount (Rs.)
Guava Planting material	6.0x6.0 m	278	13900.00
Cost of input (without integration)			30000.00
		Total	43900.00

ii) Demonstration on plantation of lemon/lime (Spacing 3x3m) in 1hectare.

Particular	Spacing	No of Plants/ha	Amount (Rs.)
Planting material	3.0x3.0m	1111	39996.00
Cost of input (without integration)			40000.00
		Total	79996.00

iii) Demonstration on plantation of Apple ber (Spacing 5x5m) in 1hectare.

Particular	Spacing	No of Plants/ha	Amount (Rs.)
Planting material	5x5m	400	12000.00
Cost of input (without integration)			23000.00
		Total	35000.00

Annexure –VIII

12.D. PRODUCTION OF QUALITY PLANTING MATERIAL

a. Mass multiplication of quality planting material

i) Raising root stock Seedling:

Sl. No.	Particulars	Qty.	Rate (Rs.)	Approx. Cost (Rs.)
1.	Mango seed (local)	10000	1.50/ no.	15000.00
2.	Guava seed (local)	4	1,000.00/kg	4000.00
3.	Citrus seed (Rangpur lime, Rough lemon and Volkamariana)	10 kg	4000.00/kg	40,000.00
4.	Acid lime	5 kg	4000.00/ kg	20,000.00
5.	Assam Lemon	5 kg	3000.00	15000.00
6.	Cashew seed (local)	100 kg	150.00/kg	15000.00
7.	Poly bags	200 kg	200.00/kg	40000.00
8.	Sand	3 truck loads (300cft)	5000.00/truck	15000.00
9.	Coco peat bricks (1x1x1 ft)	200 pcs	100/pcs	20000.00
10.	Vermiculite	200 kg	40/kg	8000.00
11.	Perlite	100 kg	80/kg	8000.00
12.	Chemical for media sterilization(Basamide / Silvox)	10 kg	1000/kg	10000.00
			Total	**210000.00**

ii) Propagation Activity

Sl. No.	Particulars	Qty.	Rate (Rs.)	Approx. Cost (Rs.)
1.	Cashew scion sticks	5000 nos.	2.0/scion stick	10000.00
2.	Citrus scion sticks	5000 nos.	2.0/scion stick	10000.00
3.	Mango scion sticks	2000 nos.	5.0/scion stick	10000.00
4.	Budding and grafting knife	10 nos.	500.00 each	5,000.00
5.	Secateurs	5 nos.	1000.00 each	5000.00
6.	Label and tags	20000nos	2/label	40000.00
7.	Poly strips	25 kg	200.00/kg	5000.00
8.	Poly caps	25 kg	200.00/kg	5000.00
			Total	**90000.00**

Grand Total: (i) + (ii) = Rs.210000.00 + Rs. 90000.00

= **Rs. 3,00,000.00**

Annexure –IX

12.F.CERTIFICATE COURSE

S.No.	Particulars	Details	Budget provision available (Rs)	Proposed budget (Rs)	Reference
1.	Boarding & Lodging *	Rs.750/head/day (750 x 20 trainees x 90 days)	Rs. 13.5 lakh	Rs. 7.0 lakh	Guidelines of model training courses conducted under Dte. of Extension, DAC for Central Institutes w.e.f 1st April 2014
2.	Exposure visits**				ATMA Guidelines 2014 under National Mission on Agriculture Extension and Technology, Annexure-IV (Page No.98).
	a) Within the State	Rs. 400/head/day (Rs. 400 x 20 trainees	Rs 8000/-		
	b) Outside the State	Rs. 800/head/day (Rs.800 x 20 trainees x 5 days	Rs. 80000./-	Rs 80000.00	
3.	Honorarium to Lecturers /guest speakers				Guidelines of model training courses conducted under Dte. of Extension, DAC for Central Institutes w.e.f 1st April 2014
	a) Guest speakers level –i	Rs. 800/visit (Rs. 800 x10 visits)	Rs.8000/-	Rs. 8000.00	
4.	Supply of supportive literature & books ***	Rs. 500/head for 8 days training as per MTC. (Rs. 5625/head x20 trainees)	Rs.112500/-	Rs 50000.00	Guidelines of model training courses conducted under Dte. of Extension, DAC for Central Institutes w.e.f 1st April 2014
5.	Preparation of Audio Visual aids ****	Rs. 2000/course	Rs. 2000/-	Rs 2000.00	
6.	Stationery & miscellaneous contingencies	Rs. 250/head x 20 trainees) for 8 days MTC	Rs. 5000./-	Rs 5000.00	
7	Miscellaneous Expenditure	Rs. 5000/course for 8 days MTC (Rs 625/head x 20 trainees)	Rs. 12500. /-	Rs 12500.00	
	Total			902500.00	

Proposed budget required for 03 months course during 2022-23: **Rs. 500000.00**
(Rupees five lakh only)

* Expenditure on Board (Tea. Breakfast. Lunch and dinner) and lodging is to be incurred at the prescribed rate of Rs. 400/head/day for the actual number of trainees. No outsider other than the participants/guest speakers is entitled to avail of free boarding and lodging.

** ATMA Guidelines 2014 under National Mission on Agriculture Extension and Technology. Annexure-IV (Page No.98)

*** The supportive literature and books relevant to the subject of the training course costing upto Rs. 5625/- per participant may be purchased and supplied during the course. (Calculation made on the basis of cost norms of Rs. 500/ head for 8 days training)

**** Cost towards preparation of teaching materials including audio visuals and Power Point presentation are advocated as it enhances the effectiveness of the talks/discussion.

MTC - Model Training Course.