



बाणगङ्गा नगरपालिका नगर कार्यपालिकाको कार्यालय

पत्र संख्या : ०८९।८२

चलानी नम्बर : ४६८६

बाणगङ्गा, कपिलवस्तु
लुम्बिनी प्रदेश, नेपाल



मिति: २०८२/०२/०८

विषय: प्लाष्टिक टनेल (न्याचुरल्ली भेन्टिलेटेड टप भेण्ट ग्रीनहाउस) निर्माणको दररेट (कोटेशन) उपलब्ध गराई दिने बारेको सूचना ।

प्रस्तुत विषयमा बाणगंगा नगरपालिका, कृषि विकास शाखाको चालु आ.व. २०८१/०८२ को वार्षिक स्वीकृत कृषि विकास कार्यक्रम अनुसार उन्नत प्रविधि प्रदर्शनको लागि प्लाष्टिक टनेल स्थापना तथा व्यवस्थापन कार्यक्रम अन्तर्गत प्लाष्टिक टनेल (न्याचुरल्ली भेन्टिलेटेड टप भेण्ट ग्रीनहाउस) निर्माण गर्नु पर्ने भएकोले नगरपालिकामा सूचिकृत रहेका फर्म/कम्पनी/सप्लायर्सहरूले सम्मान स्पेसीफिकेशन अनुसारको प्लाष्टिक टनेल (न्याचुरल्ली भेन्टिलेटेड टप भेण्ट ग्रीनहाउस) निर्माण गर्न सकिने दररेट (कोटेशन) ७ (सात) दिन (मिति २०८२/०२/१४ गते) भित्र गोप्य सिलबन्दी गरी आवश्यक कागजात सहित उपलब्ध गराई दिनु हुन सम्बन्धित सरोकारवालाहरूमा यसै सूचनाद्वारा अनुरोध गरिन्छ ।

सम्लग्न गर्नुपर्ने आवश्यक कागजातहरू

१. फर्म/कम्पनी/सप्लायर्स दर्ता भएको दर्ता प्रमाण पत्रको प्रतिलिपी
२. आ.व. २०८०/०८१ को चुक्ता प्रमाण पत्रको प्रतिलिपी
३. स्थायी लेखा नम्बर (PAN /VAT) दर्ता प्रमाण पत्रको प्रतिलिपी
४. नागरिकताको प्रतिलिपी

नोट:- विस्तृत जानकारीका लागि बाणगंगा नगरपालिका, कृषि विकास शाखा कपिलवस्तुमा सम्पर्क राख्नुहोला।
सम्पर्क नम्बर-९८४१३५२७४७, ९८४७०५२९५४

राज कुमार तिवारी

नि. प्रमुख प्रशासकीय अधिकृत

नामिता प्रमुख
प्रशासकीय अधिकृत



Name of Beneficiary: Banganga Municipality, Office of Municipal Executive, Banganga, Kapilvastu
Address: Banganga, Kapilvastu

Technical standards of Naturally ventilated Polyhouse (Specification)		
S.N	Type	Item
1		General Specification Minimum top ventilation will be 10% of total Polyhouse/Greenhouse area and side ventilation depends on requirement of the climatic conditions. Preferably saw tooth design or even span, ridge & furrow depending upon suitability for naturally ventilated polyhouse/greenhouse.
2	Grid size	8m x 4m
3	Shape	
4	Structure	To reduce the impact of wind and consequent damage to greenhouse str. Design of greenhouse will be aerodynamic It not dip galvanised tubular str. All must be NS or ISO standards.
5		Size of the structural members
		Members Name
		Column
		Top purlin
		Gutter purlin
		Top arches of the truss
		Bottom chord of the truss
		Internal bracing of the truss
		Corridors/Balconies
		Curtain Runner
		Flap control pipe
		Curtain shaft
		Cross bracing
6	Fixtures to join structural members	OD (mm)
		Thickness (mm)
		60
		2
		42
		2
		42
		2
		42
		2
		48
		2
		32
		2
		32
		2
		21
		2
		27
		2
		33
		2
		Different type of fixtures are used to join structural members of polyhouses like brackets, cleats, clamps, nut and bolts, washers, self-tapping, and drilling screw etc. The entire iron fixture should be galvanised and strong enough. Made from the section like angle, channel and I beams.
		Different type of clamps like 60/48/42/33 OD full, 60/48/42/33 OD half are used which should be made from min. 42 mm wide and 2.1 mm thick GP coil having min. 120 gsm galvanisation. Curtain clamps should be made from high carbon steel strips of min. 30mm wide and 0.8mm thick. Such clamps should have proper spring action so that after fixing at the place they should not change the location. From M12 to M6 bolts, nuts, washers should be used and they should be cold galvanised within 120 gsm coat
9	Nut/Bolts and washers	
10	Gutter	It should be made of GI sheet of 2mm thickness in trapezoidal shape having 500mm wide perimeter coil having 12 gsm galvanization. Leak proof. Min. 1% slope required for the gutter. Assure uniform slope to gutter to avoid stagnant water in gutter to achieve maximum life of gutter. Note: Gutter location /orientation North-south or may change acc. to wind direction. It must be 3-4m from the foundation formation level. (At least 3 m side height above G.L.) It will be 5-5.5 m from the Ground level
11	Gutter height	
12	Ridge height	
13	Arches Overlap	Minimum overlap of top arch over second (small) arch should be 600 mm to avoid direct rain entrance into the greenhouse from the vent.
14	Foundation	Pit size will be minimum 45 cm dia. And depth 90 cm or suitably altered depending upon ground level so as to ensure safety and stability of the structure even under extreme wind conditions. Column are fitted over ground insets and bolted to insert pipe of 60 mm OD, 2 mm thickness GI pipe.
15	Curtain openings	In general temperature inside the polyhouse is more than ambient. To reduce the inside polyhouse temperature, increases side ventilation.
16	Bottom Apron	To top the CO2 inside the greenhouse, bottom apron is necessary. It will have minimum 2 ft. height from the ground level and max. 1.5m depending upon the crop and climatic conditions.

CHHABI DANGI CHHATRI
Agriculture Engineer
Date: 27/8 '21

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Prepared By:

S.N	Item	General Specification
17	Top and Side Shading	Top shading can be done by using these methods a) Shading net must be made from HDPE. Selection of shade net depends upon variety of crops and light spectrum. It will not be 50% shade factor. UV stabilised (at least 3 years life time). GSM should be at least 100 gsm. To increase its utility, opening and closing arrangement of shade net should be manual or auto.
18	Polyethylene	Polyethene will be properly UV stabilised, at least 7 layer multi layer 200 micron (0.2mm), options in greenhouse film: UV stabilised, light Diffusion, Optional properties: UV blockings/anti virus, Sulphur resistant, thermic, anti drop, anti mist, anti dust, Manufacturing process: 7 layer poly film.
19	Door	Single door entry, door should be made from 7 layer 200 micron poly film
20	Aluminium profile/poly fixing	C type profile made from GI sheet having high strength with light weight, smooth edges, curve bottom proper for 1.25" and 3" pipes. Proper channel for spring and suitable for double spring locking 0.9mm thick. Self drilling screw should be fixed on profile every 50 cm along the full length of the profile.
21	Spring insert	A coated GI wire spring of 2 mm diameter, having good elasticity which transfer less heat to the cladding materials as plastic films or shade net. In case of GI spring, it is good to use 2" strap of the new poly film to be placed over the main plastic in the profile and lock it with GI profile.
22	Drip Irrigation	It must consist of main line 50mm/63mm and 16mm round drip irrigation later pipes discharge 4 lph with 50 cm spacing with screen filter, pumping systems, drip fittings all complete with 25 micron mulching plastic 1.2 m width

Summary

Gable Length (8 Mtr. width)	8 mtr.	
Gutter Length (4 Mtr. x 4 No. of Bays)	16 mtr.	
Size of Unit	128 sqm	
Total no. of Units	1	
Structure	INCLUDED	
Top Covering Plastic	7 layer Multilayer poly film	
Side Covering Plastic	7 layer Multilayer poly film	
Secondary Layer Aluminium thermal net (Manual System)	Aluminium Shade Net 50%	
Double door entry System	Included	
Drip Irrigation	Included	

[Signature]

प्राप्त एवं
अनुमोदित

CHITABI DANGI CHEETRI
Civil Engineering
Date: 12/05/2023
Page: 376 'AE'

Prepared By:

Banganga Municipality
Office of Municipal Executive

Banganga, Kapilvastu

Bill of Quantity

Project Name: उन्नत प्रविधि प्रदर्शनको लागि प्लास्टिक टनेल स्थापना तथा व्यवस्थापन कार्यक्रम

Project site: बाणगङ्गा नगरपालिका, नगर कार्यपालिकाको कार्यालय

A. The rate quoted under here shall be inclusive of;

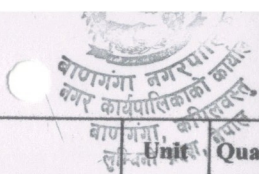
1. Supplying the materials along with accessories to the site
2. Fixing and erecting them in position as per standard practices, specification and instruction of site Engineer
3. Tests and maintenance up to the period, specified in the agreement.

B. The itemwise rate should be quoted without vat.

S.N.	Details of works	Unit	Quantity	Rate (Nrs.) Excluding VAT		Amount	Rmks
				In Figures	In words		
A)	CIVILS WORKS						
1	E/W Excavation in foundation in soft soil including lift 1.5m. and lead up to 10m all complete as per instruction of site incharge.	Cum	1.35				
2	Providing and laying P.C.C. 1:2:4 including curing all complete as per instruction of site incharge. (By using crush aggregate).	Cum	0.94				
3	Providing and laying brick masonry in 1:4 in walls, including curing all complete as instruction of site incharge.	cum	3.69				
4	Providing and laying 12.5 mm thick cement plaster in 1:4 c/s moarter including curing in wall all complete as per instruction of site incharge	sqm	67.40				
						Sub-Total (A)	
						13% Vat	
						Sub-Total including Vat (A)	
B)	NATURALLY VENTILATED TOP- VENT. POLYHOUSE						
5	Providing and installation of GI pipe constructed naturally ventilated polyhouse all complete as per instruction of site incharge.						
	Foundation base post (60 mm OD, 2mm thickness) 1m length	pcs	12.0				
	Side Post (60mm OD, 2 mm thick) 4m length	pcs	10.0				
	Centre Post (60mm OD, 2 mm thick) 6m length	pcs	2.0				
	small bottom pipe (2 mm thick, 1.5" 48 mm OD) 4m length	pcs	4.0				

CHANDAN CHHETRI
Architect Engineer
NEC 378 'AE'

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S.N.	Details of works	Unit	Quantity	Rate (Nrs.) Excluding VAT		Amount	Rmks
				In Figures	In words		
	Big bottom pipe (2 mm thick, 1.5" 48 mm OD) 6m length	pcs	3.0				
	Bottom joiner pipe (2 mm thick, 1.5" 48 mm OD) 2m length	pcs	3.0				
	Center support pipe (2 mm thick, 1.5" 48 mm OD) 2m length	pcs	3.0				
	Cabin pipe (2 mm thick, 1.25" 42 mm OD) 4m length	pcs	4.0				
	Cabin pipe (2 mm thick, 1.25" 42 mm OD) 4m length	pcs	2.0				
	Cabin Pipe (2 mm thick, 1.25" 42 mm OD) 2.5m length	pcs	2.0				
	Lower Perlin pipe (2 mm thick, 1.25" 42 mm OD) 4m length	pcs	4.0				
	End Perlin pipe (2 mm thick, 1.25" 42 mm OD) 4m length	pcs	8.0				
	Top Perlin pipe (2 mm thick, 1.25" 42 mm OD) 4m length	pcs	4.0				
	Small Arc pipe (2 mm thick, 1.25" 42 mm OD) 4.25m length	pcs	5.0				
	Big Arc pipe (2 mm thick, 1.25" 42 mm OD) 5m length	pcs	5.0				
	cooling pad & fan support pipe (2 mm thick, 1.25" 42 mm OD) 6m length	pcs	3.0				
	cross column to column pipe (2 mm thick, 1" 32 mm OD) 5m length	pcs	8.0				
	cross arc to arc pipe (2 mm thick, 1" 32 mm OD) 5m length	pcs	4.0				
	Runner (0.75" 25 mm OD) 4m length	pcs	4.0				
	Member (0.75" 25 mm OD) 2m lenth	pcs	10.0				
	Member ii (0.75" 25 mm OD) 1.4m length	pcs	5.0				
	Member iii (0.75" 25 mm OD) 1.2m length	pcs	5.0				
	Apron Perlin (0.75" 25 mm OD) 4m length	pcs	11.0				
	Vent. Member (0.75" 25 mm OD) 0.9m length	pcs	5.0				
	Rolling Handle (0.75" 25 mm OD) 3m length	pcs	2.0				
	Curtain Pipe (0.5" 16 mm OD) 6m length	pcs	6.0				
6	Providing and installation of drip irrigation system including 1000 lts. PVC water tank, 1 Hp ISO certified motor, mainline 50mm pvc pipe, 50mm disk filter, 16mm lateral pipe all fitting and setup as per instruction of site incharge.	L/S	1.00				
7	Providing and laying UV stabilized insect proof net (40 mesh to 40 mesh) all complete as per site instruction.	sqm	153.0				
8	Providing and laying U.V- stabilized Polyethylene film (cladding/cover materials) of 7 layer 200 micron thickness blocking, Anti drip/ fog, Diffused (Multi layer) for Top covering and side all complete as per instruction of site incharge.						
a)	U.V- stabilized Polyethylene film (cladding/cover materials) of 7 layer 200 micron	sqm	480.0				
b)	Apron	sqm	55.5				

CHANDI DANGI CHETTRI
Agriculture Engineer
NEC 378 'AE'

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S.N.	Details of works	Unit	Quantity	Rate (Nrs.) Excluding VAT		Amount	Rmks
				In Figures	In words		
9	Providing and fixing UV Stabilized Shade Net 50% inside green house with manual rolling or shifting system with support cables, pulleys, side support with clamps with manual collapsable arrangement. along with fixed thermal net on two longer sides of greenhouse all complete as per instruction of site incharge	sqm	138.6				
10	Aluminium locking profile with zig-zag spring, M10, M8, M6 nut bolt, clamps and other accessories						
	GI locking profile	rm	240				
	Galvanised Zigzag wire	rm	300				
	3/4" self/silt screw	pcs	650				
	4" bolt	pcs	36				
	3" bolt	pcs	30				
	2.5" bolt	pcs	24				
	1.5" bolt	pcs	170				
	10 mm nut	pcs	260				
	10 mm washer	pcs	260				
	I Bolt	pcs	20				
	60mm full clamps	pcs	60				
	42mm full clamps	pcs	30				
	76 mm half clamps	pcs	6				
	60 mm half clamps	pcs	30				
	42 mm half clamps	pcs	24				
	T fiture (32*32)	pcs	3				
	L fiture (32*32)	pcs	2				
	F bracket	pcs	10				
	L bracket	pcs	4				
	White pully	pcs	4				
	Curtain ring	pcs	80				
	Net joiner black	pcs	80				
	Curtain clamp (25mm)	pcs	40				
	Twisted wire	m	140				
	Polyster wire	m	90				
	Roll up universal joint (25mm)	pcs	2				
	Roolling joiner (16mm)	pcs	4				

CHHABRI DANGI CHHETRI
 Assistant Engineer
 NEC 2nd AE

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 प्रशासकीय अधिकृत

[illegible]

Contractor's Firm:

PAN / VAT NO.:

Seal:

Proprietor's Name:

Address:

Tel/Mob no:

CHHABI DANGI CHHETRI
Agriculture Engineer
178 'AE'

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