ANNUAL PLAN 2014-15

(Proposed Outlay)

DIRECTORATE OF HUMAN RESOURCE MANAGEMENT

CCS HARYANA AGRICULTURAL UNIVERSITY

HISAR –125004

CCS Haryana Agricultural University, Hisar
Memorandum Explanatory of the Plan Schemes

1. Plan Head : 2415 - Agril. Res. & Education (Plan)/01- Crop Husbandry/277 - Education/[99] - Grant-in-aid to HAU.

2. Name of the Scheme: 2415- Agricultural Research & Education (Plan)

3. Description of Explanatory Memorandum of the Scheme:

a) **When the scheme was started and when it is due for completion:** The only scheme **"2415 – Agricultural Research & Education"** being operated in the university started in 1970-71 and is likely to continue indefinitely, as the mandate of the university/ scheme is teaching, research and extension. The scheme for the sake of operational convenience has, however, been split into 125 sub-schemes, which includes 14 sub-schemes meant for exclusive benefit of the scheduled castes.

b) **Financing pattern of the scheme :** State Plan (SP)

The proposed outlay for the Annual Plan 2014-15 of this university is Rs.19000.00 lakh (excluding internal accruals) but including Rs.460.00 lakh for SCSP. **Schematic Details are given at Annexure I (Page Nos. 16 - 22).** Besides, the university has one centrally sponsored scheme (CSS) entitled, "C© Econ.1.C.S."Studying the cost of cultivation of principal crops in Haryana" funded hundred per cent by Government of India, Ministry of Agriculture, Department of Agriculture and Co-operation. The budget estimates for the CSS during 2013-14 are Rs.179.00 lakh.

c) **Aims and Objectives of the Scheme and its performance till date**: To strengthen and carry out teaching, research and extension for the ultimate welfare of the farming community, the university has produced 10246 graduates in Agriculture, Agril.Engg. & Tech., Home Science and Veterinary & Animal Science and 5096 M.Sc./M.Tech./M.V.Sc. and 1901 Ph.Ds in Agriculture & Allied disciplines up to the year 2012-13. Besides, over 250 varieties improved in different traits, of field crops, vegetables and horticultural crops have been developed/released. Many of these developed varieties are in active use even at the national level.

d) **Targets achieved so far: Salient achievements of the university during 2012-13 are as under :**

TEACHING:

- Three hundred & eleven students were admitted to various under-graduate programmes for the academic session 2013-14 for which as large as 15949 students appeared in various entrance examinations. In addition to this, 11 foreign students from countries viz., Bhutan, Malawi, Afghanistan, Somalia, Fiji and Mongolia were also admitted in B.Sc. (Hons.) Ag. 4-Year Programme.
- Two hundred students were admitted to M.Sc./MBA/M.Tech.(Agril.Engg.) in different colleges. This includes 7 foreign students from countries viz., Afghanistan, Vietnam, Ghana, Indonesia and Sri Lanka.
- Nineteen students were awarded other agencies fellowship viz., Inspire fellowship of DST (12), JRF from Haryana State Council of Science & Technology (2), JRF from CSIR (2) and Rajiv Gandhi National Fellowship for SC/ST students (3).
- A new PG diploma in "Remote Sensing and GIS Applications in Agriculture and Environment" has been introduced from the Academic Session 2013-14.
- The following teachers as per details below were bestowed with the Best Teacher Awards for the year 2009-10 & 2010-11. The functions for the purpose were held during March, 2013 & Dec., 2013, respectively :

Name of College	Name of Teacher	Department
2009-10		
College of Agriculture, Hisar	Dr. R. K. Pannu	Agronomy
College of Agriculture, Kaul	Dr. Labh Singh	Extension Education
College of Basic Sciences & Humanities	Dr. S. C. Goyal	Botany & Plant Physiology
College of Home Science	Dr. Savita Singal	Family Resource Management
College of Veterinary Sciences	Dr. R.P.Gupta	Veterinary Pathology
2010-11		
College of Agriculture, Hisar	Dr.K.S.Bangarwa	Forestry
	Dr. V. K. Phogat	Soil Science
College of Agril.Engg. & Tech.	Dr. R.K.Jhorar	Soil & Water Engg.
College of Basic Sciences & Humanities	Dr. S. S. Sindhu	Microbiology
College of Home Science	Dr. (Mrs.) S. K. Verma	Extension Education & Communication Mgt.

To realize the objectives of the SCSP scheme, besides conducting trainings in enhancing soft, IT and interview skills for SC students, allowances for books are disbursed to the UG/PG students of the university and wards of the SC employees of CCSHAU, Hisar. Students are also funded for membership of various scientific societies and participation in conferences. In a similar vein, SC farmers/folks are also trained in various income generating activities and are provided inputs during the trainings. These activities are a regular feature of the scheme and are undertaken afresh on year to year basis, with a new group of beneficiaries walking in every time. The targets although achieved every year, yet would continue to be achieved to cover more and more of the beneficiaries belonging to this category. During the year 2012-13, nearly 180 trainings for students as well as village folks/farmers have been conducted at the campus/KVKs spread over the state, for the direct benefit of scheduled castes. The vocational trainings mainly on Bee keeping, Mushroom cultivation, Fruit & Vegetable Processing, Cutting and tailoring, Garments fabrication/manufacturing, Detergent & soft toys making etc. to enhance awareness among the SC farmers/village folks and computer trainings for students at the University, were conducted. During these trainings, the **participants were provided free boarding and lodging and to and fro allowances to travel. They were also provided with registration kits/free inputs such as pressure cookers, sewing machines, mixers, bee-keeping kits, pasteurized spawned compost bags along with casing material and computer peripherals etc.**

RESEARCH:

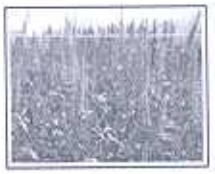
CROP IMPROVEMENT

Varieties/hybrids released and notified

Wheat variety WH 1105 has been released and notified for cultivation under timely sown, irrigated areas in North Western Plain Zone (Delhi, Haryana, Punjab, Rajasthan, UP, Jammu region of J&K and the foot hills of Himachal Pradesh & Uttrakhand). It gave an average yield of 52.5 q/ha and potential yield of 71.6 q/ha. It exhibited excellent degree of resistance to yellow & brown rusts, flag smut, leaf blight and powdery mildew diseases.

Durum wheat variety WHD 948 has been released and notified for cultivation under timely sown, irrigated conditions of Peninsular zone (Maharashtra and Karnataka). It gave an average yield of 51.9 q/ha and potential yield of 69.5 q/ha.

Pearl millet hybrid HHB 234 has been released and notified for cultivation in zone A_1 (Haryana, Rajasthan and Gujarat) of the country. It has yield potential of 35.0 q/ha under rain fed conditions and 45.0 q/ha under better management situation. It is resistant to downy mildew and blast, having small bristles and candle shaped medium long ear head.



First public sector white maize hybrid HM 12 has been released and notified for *kharif* cultivation in Eastern UP, Bihar, Jharkhand, West Bengal and Odisha. It has semi dent bold grain, long and thick cobs and 12% yield superiority over qualifying check Bio 9637. It is tolerant to stem borer under natural field infestation conditions, resistant to maydis leaf blight in *kharif* and common rust in *rabi* season.

Sesame variety HT 9713 (HT-2) has been notified for cultivation in Haryana, Punjab, Himachal Pradesh and J&K. It gave 15 and 25% higher seed yield over the national check RT 54 and zonal check Pargati. It is moderately resistant to phyllody and leaf curl virus.

Raya Variety RH-0749 has been released and notified for timely sown irrigated conditions of Haryana, Punjab, Delhi and parts of Rajasthan. It is bold seeded variety with long & thick siliqua, average yield of 26-28 q/ha and oil content of 39-40%.

Sorghum variety HJ 541 has been recommended for release and notification to the Central Seed Sub Committee for cultivation in Haryana State. It is very tall, sweet, resistant to stem borer, better in quality and produces 18-20 q/ha seed alongwith 550 q/ha green and 125 q/ha dry fodder yield.

Berseem variety HB 2 released and notified for Haryana State. It has longer duration, light green foliage colour, GFY about 750-800 q/ha, better regeneration, resistant to stem rot disease (<10%).

The Central Variety Release Committee has released and notified:

Garlic variety **HG-17** has been released at State level. Average yield is 120-125 q/ha, high yielding, good storage life, bulb weight is better and least incidence of purple blotch disease.

Brinjal variety **HLB-25:** Average yield is 200 q/ha in spring–summer season. Suitable for summer season, fruits medium long, slender and bright purple with tolerance and tendency to set fruits at high temperature

Seed Production

University produced a total of 20587.41 q seeds during 2012-13. It includes 99.23, 3035.09, 2832.85, 8714.50 and 1945.22 q nucleus, breeder, foundation, certified and TFL seeds of various crops. Also, 2421.05 q breeder seed of various varieties of sugarcane and 1539.17 q quality seeds of various vegetables crops was produced. In addition, 16399 and 7327 seedlings of different horticultural and medicinal plants were sold during 2012-13.

In 228 paddy seed samples collected from paddy growing areas, bunt infection was ranged between 0.05 to 0.15%. Highest infection was observed in variety Pusa-44 (0.15%) followed by HKR-127.

Out of 610 wheat seed samples, 13.44% were found infected with Karnal bunt (infection ranged 0.05-0.30%). Maximum average infection was found in Yamunanagar and Karnal districts, whereas minimum in samples collected from Sirsa and Hisar districts.

Hydropriming for 16 hrs followed by drying under shade has been found effective to enhance seed yield by 5.55% in pearl millet (HHB 197) and 6.6% in wheat (WH 711).

The sieve size of 2.2 mm was found effective and economical for grading seed of wheat varieties WH-711, PBW-502 and HD-2967 registering highest seed recovery (>91.3%), germination (>92.0%) and physical purity (>98.3%). Whereas, the sieve size of 2.4 mm was suitable for grading WH-283.

CROP PRODUCTION

Agronomy

Direct seeded *basmati* rice in sequence with zero tillage (ZT) wheat yielded similar to puddled transplant rice with overall improvement in rice wheat system productivity.

DSR improves rice-wheat system productivity along with saving in irrigation water (20-40%), labour cost (Rs. 3500-4000/ha) and puddling cost (Rs. 2500-3000/ha).

System productivity in rice-wheat, sorghum (fodder)-wheat and pearl millet-wheat was sustainable under long-term (13-16 years) zero-tillage. Zero tillage in wheat was successful and remunerative in non rice-wheat cropping systems in S-W Haryana.

Grain yield of wheat was significantly higher (53.6 q/ha) in furrow irrigated raised bed system over zero tillage (48.9 q/ha) and conventional tillage (48.1 q/ha).

Bt. cotton (RCH 134 BG-I) performed best under in 3rd week of April sowing at spacing of 100 x 45 cm with seed rate of 2.7 kg/ha.

High yielding pearl millet hybrid HHB 223, responded to 125% recommended dose of nitrogen (156.25 kg/ha) as compared to recommended dose of nitrogen (125 kg N/ha).

Sowing of wheat with water primed and primed seed inoculated with AM fungi and Azotobacter increased grain yields by 2.6, 10.1 and 4.4%, respectively over conventional practice (3406 kg/ha) under late sown condition.

Productivity of quality protein maize (HQPM 1) was comparative under ZT, FIRBS and CT.

In winter maize, the grain yield of QPM hybrids, full season and medium maturity hybrids increased significantly up to 210 N+70 P_2O_5 +70 K_2O kg/ha. In spring maize, highest grain yield was recorded with 10th February sowing at 75×20 cm spacing and 187 N + 60 P_2O_5 + 60 K_2O kg/ha fertilizer dose.

Pendimethalin 1.0 kg/ha (pre emergence) followed by bispyribac-sodium 25 g + premix of penoxsulam + cyhalopfop or azimsulfuron 25 g/ha, and bispyribac sodium + metamifop 14% SE @ 70 g/ha at 15 DAS provided effective control of weeds in direct seeded rice.

Bispyribac-Na 25 g/ha + ethoxysulfuron 18.8 g/ha or chlorimuron + metsulfuron (R. mix) 4 g/ha at 25 DAT provided effective control of complex weed flora in puddled transplant rice.

Premix of imazethapyr + imazamox (Odyssey) 70 g/ha was safe to clusterbean with no residual effect on succeeding mustard crop. Imazethapyr (weedblock and pursuit) 100 g/ha was effective against most of the weeds in clusterbean and mungbean with no residual effect on succeeding wheat crop.

Tank mix of pendimethalin 500 g + imazethapyr 50 g/ha applied pre-emergence was effective against most of the weeds in clusterbean and mungbean with no residual effect on succeeding wheat and mustard crop.

Propaquizafop (Agil) 62.5 g/ha was very effective against grassy weeds in cotton and had no residual effect on succeeding wheat crop.

Continuous use of clodinafop 60 g/ha and rotational use of pinoxaden 50 g/ha provided quite effective control of *P. minor*. There were no signs of development of resistance due to continuous use of herbicide.

Pinoxaden 50 g/ha + premix of metsulfuron and carfentrazone (Ally Express 50% DF) 25 g/ha + 0.2% NIS as post-emergence or clodinafop 60 g/ha fb metsulfuron 4 g/ha (sequential application) as post-emergence were very effective against complex weed flora and produced the grain yield of wheat similar to weed free check (4340 kg/ha).

In on farm trials, post emergence use of UPH-110 at 600 g/ha (Product dose) although found promising to control clodinafop resistant *Phalaris minor* and broadleaf weeds but caused injury to wheat varieties viz. HD 2851, PBW 502, PBW 550, DPW 621-50, Barbat and DBW 17 in terms of leaf chlorosis, stunting and necrosis. However, crop recovered 30 days after treatment.

Tank mix application of metribuzin 105 g/ha with already recommended herbicides like clodinafop 60 g/ha, sulfosulfuron 25 g/ha or pinoxaden 50 g/ha, improved the control of *Phalaris minor* in wheat.

Use of glyphosate for the control of *Orobanche* reveal post emergence application of glyphosate 25 g/ha at 30 DAS followed by its use at 50 g/ha at 60 DAS provided 60-85% control of *Orobanche* at farmers' fields.

Dryland Agriculture

Raya was more productive and economical than chickpea when *in situ* moisture was conserved under 1.5 % slope and 1/3rd receiver area.

In rain fed raya, application of 60 kg N, 30 kg P_2O_5 and 10 kg K_2O ha^{-1} gave promising results when compared with 40 kg N, 20 kg P_2O_5 and 10 kg K_2O ha^{-1}.

Agricultural Meteorology

Raya variety RH 0749 was highly efficient in conversion of radiation into biomass (3.60 g/MJ).

Wheat grain yield was predicted by DSSAT model at mid-season and pre harvest stage with 5.4% and 3.0% deviation from actual yield, respectively.

The SMS on weather alerts in Hindi as well as English were issued to more than 50000 farmers, agriculture officers and other stake holders. The forecast accuracy of rainfall was 87.4% during the year 2012-13.

Soil Science

For re-assessment of micro and secondary nutrients, soil samples from three districts i.e. Karnal (274), Jind (312) and Palwal (305) were collected and analyzed. Maximum deficiency of Zn (13.78%) and Fe (18.27%) was found in Jind district. Mn deficiency was found < 1% in soils of all the districts whereas Cu deficiency was maximum (4.26%) in Palwal district. In case of B, 5.84% samples were found deficient in Karnal and maximum S deficiency (52.13%) was noticed in soils of Palwal district.

In Bhuna, Fatehabad, Jakhal, Ratia and Tohana blocks of Fatehabad district, 30.8, 43.2, 98.1, 58.4 and 60.0% water samples were of good quality, respectively, whereas, in Bhattu Kalan block, 45.4% water samples were found in high SAR saline category.

Soil test based targeted equations were developed for *Bt* cotton (MRC 6304), pearl millet hybrids HHB 197 & HHB 223, wheat variety WH 711 and raya variety RH 8812.

Application of 75% recommended dose of fertilizer + 5 t FYM/ha + Biomix @ 10 ml/kg seed in clusterbean, pearl millet and mungbean recorded significantly higher grain/seed yield over 100% RDF.

In coarse textured low N status soil (110.5 kg N/ha), wheat cv. WH-711 responded significantly up to 175 kg N/ha.

In coarse textured low P status soil (9.43 kg/ha), pearl millet responded significantly to both direct and residual phosphorus level up to 60 kg/ha and mustard up to 30 kg/ha in pearl millet-mustard cropping system.

In coarse textured medium K status (171.5 kg K/ha), mungbean and chickpea responded significantly up to 20 kg K_2O/ha.

Rice straw can be exploited as organic manure if applied with FYM + 20 kg N ha^{-1} at least one week before sowing of wheat in a wet field.

In a calcareous soil, application of phosphorus @ 75 kg P_2O_5 ha^{-1} significantly out yielded the grain yield of wheat (46.81 q/ha) over 60 kg P_2O_5 ha^{-1} (42.34 q/ha).

Critical limit of B in soil for mustard was reconfirmed and found 1.0 mg B kg^{-1} soil.

Irrigation with mini-sprinklers in wheat saved 24 mm water with an additional grain yield of 75 kg ha^{-1} as compared to surface irrigation.

Forestry

In 5½ year old poplar based agroforestry system, the yield of both berseem and wheat was found significantly higher under paired row planting (18x2x2m) than 5x4 m and 10x2 m spacing. The carbon sequestration was 77, 69 and 59% higher at 5x4 m, 10x2 m and 18x2x2 m spacing of poplar than sorghum - berseem crop rotation in sole agriculture.

In 5½ year old poplar planted in East-west or North-South field bunds the grain yield of wheat was affected up to 3 meters distance and green fodder yield of sorghum up to 6 m distance from the tree row.

In 5½ year old eucalypts based agroforestry system, barley produced significantly higher grain yield in paired row planting (17x1x1 m) than 3x3 m and 6x1.5 m spacing.

PLANT PROTECTION

Entomology

Surveillance of major insect-pests of cotton, paddy, mustard, chickpea, wheat and barley was done during different months. Pest control warnings indicating prevailing pest status and future population predictions for different insect-pests both in *kharif* and *rabi* seasons were issued to field functionaries to forewarn farmers.

Filter papers impregnated with 0.5 ml/5 L capacity dose gave 0.0, 3.7, 36.9 and 70.9 per cent adult mortality of *cigarette beetle* (*Lasioderma serricorne*) after 1, 3, 5 and 7 days of exposure, respectively.

Spinosad (185 ml/ha) sprayed plots recorded minimum (8.3%) tomato fruit damage by *Helicoverpa armigera* as compared to 12.6% in decamethrin (standard check) and 78.3% in the control. In adaptive trial, Spinosad 45SC @185 remained equally effective with the recommended insecticide (*Bt*) @ 1000 g/ha in reducing the populations of *Plutella xylostella*, *Spodoptera litura* and *Pieris brassicae*.

Biocontrol laboratory produced and supplied to farmers 2648 Tricho cards for use against sugarcane stalk borer, *Chilo auricilius* and 1760 cards for the top borer, *Scirpophaga excerptalis* management. Egg and nymphal adult parasitoids of Pyrilla were also supplied to farmers for use in more than 1625 acre of sugarcane and sorghum fields.

Imidacloprid application @ 0.05% coupled with removal of puparia bearing leaves proposed for recommendation at national level for whitefly management in sugarcane.

Rynaxypyr 20 SC application at recommended dose and combined with removal of first brood infested shoots by top borer offered better control of top borer in sugarcane than Rynaxypyr alone.

Sulfoxaflor 24 SC @ 313 and 375 ml/ha, buprofezin @ 825 ml/ha and imidacloprid 17.8 SL @ 50 ml/ha were found effective against plant hopper in rice.

Thiocyclam hydrogen oxalate 4G @ 12.5 kg/ha, rynaxypyr 20 SC @ 150 ml/ha and acephate 75 SP @ 667 ml/ha were found effective against leaf folder in rice.

Pseudomonas maltophilia @ 20 ml/kg seed and Ethion 50 EC @ 5 ml/kg seed were found effective for termite control in wheat.

Seed treatment of clusterbean with thiamethoxam and imidacloprid recorded significantly low population of leafhopper over the control up to 45 days of sowing.

Chilo partellus incidence was found lowest in the maize seed treated with imidacloprid 600 FS @ 8 ml/kg and cowpea grown as intercrop.

In pigeonpea, minimum damage by tur pod fly was recorded in Cypermethrin 25 EC (187.5 ml/ha) sprayed plots.

In groundnut, chlorpyriphos 20 EC @ 25 ml + *Pseudomonas maltophilia* 4 @ 10 ml + Captan 3 g/kg seed was found effective in controlling whitegurb.

Nuvaluron 10 EC found compatible with urea as tank mixing for managing the larval population of *H. armigera* in chickpea.

In Indian mustard, Imidacloprid 17.8 SL @ 5 ml/kg seed proved effective against painted bug and yielded (17.1 q/ha) statistically at par with Malathion 50 EC @ 1 ml/l of water (15.5 q/ha).

Residue studies of different insecticides on vegetables revealed that half-life periods of acephate, profenophos, triazophos, chlorpyriphos and cypermethrin in different vegetables (brinjal, cabbage, cauliflower, chillies, tomato and okra) ranged from 1.22 to 4.65 days.

Plant Pathology

Among 55 *Bt* cotton hybrids evaluated against cotton leaf curl virus only two i.e. RCH 650 BG II and Bioseed 6317 were found completely free from disease, whereas, Bioseed 6539, KSCH 211, Border, PRCH 711, NCS 9002, Bunty, ZCH 1102 and Platinum 605 had disease index upto 5%.

Application of carbendazim @ 1 g/m^2 in paddy nursery after 25 days of sowing was found effective against bakanae disease.

Kresoxim methyl @ 1.0 ml/l, azoxystrobin at 1.0 ml/l and trifloxystrobin 25% + tebuconazole 50% were found effective against neck blast in rice.

Propiconazole 25 EC @ 1 ml/l sprayed at 50% panicle emergence or booting stage was found most effective against false smut of rice.

In pearl millet seed treatment with biological agent *Bacillus pumulis* (INR 7 @ 8 g/kg seed) and Chitosan @ 2.5 g/kg seed controlled downy mildew to the extent of 83%.

Survey and surveillance of wheat diseases indicated that incidence of yellow rust was more in Yamuna Nagar, Karnal, Kurukshetra and Ambala districts. Leaf rust appeared during the third week of March. WH 542 variety is still maintaining resistance against yellow rust. Flag smut incidence was more prevalent in Wheat variety PBW 343.

Four sprays of cypermethrin (10 EC) @ 0.1 % at 10 days interval controlled Iris yellow spot virus of onion most efficiently with disease incidence 11.2% only in comparison to 30.6% in control.

Seed to seed method of seed production in onion with three sprays of deltamethrin (0.2%) and mancozeb (0.2%) at fortnight intervals proved effective in terms of management of disease complex (onion yellow dwarf virus, Irish yellow spot virus and Stemphylium blight/purple blotch) in comparison to bulb to seed method.

Nematology

In a survey of vegetables & horticultural crops, grown in polyhouses, conducted district-wise revealed the infestation of root-knot nematode, *Meloidogyne* spp. in capsicum, cucumber and tomato with frequency of occurrence of 37.5, 50.0 and 33.3%, respectively, and population range of <100 to >200, 100 to >200 and >200, respectively.

For the management of rice root-knot nematode in rice nursery, covering of nursery site with LDPE for 15 days proved effective.

For the management of root-knot nematode in okra, highest yield (75.0 q/ha) was obtained by soil application of Bioderma (*Trichoderma viride*) @ 2.5 kg/ha as compared to check (58.0 q/ha).

In *Bt* cotton, seed treatment with *Gluconacetobacter diazotrophicus* st. 35-47 @ 50 ml/kg seed+carbofuran @ 1.0 kg a.i./ha as soil application against root knot nematode yielded 23.5 q/ha as compared to 17.5 q/ha in check.

Neem cake @ 100 g/m^2 as soil amendment proved most effective against citrus nematode as well as root-knot nematode in grapevine.

In nematode infested field, neem cake @ 100 g/m^2 and *Trichoderma viride* @ 2.5 kg/ha as soil application proved highly effective in enhancing pigeonpea yield. Seed treatment with *Trichoderma harzianum* @ 2.5 kg/ha and *Pochonia chlamidosporya* @ 10 kg/ha proved effective against nematodes in pigeonpea.

Horticulture

Spray of 2,4-D (10 ppm) + ziram (0.25%) in kinnow decreased fruit drop by 52 per cent over control.

Old ber rootstocks headed back at 30 cm height and budded during July gave maximum (72.7%) budding success.

In strawberry cv. Ofra, maximum number of fruits (31.4/plant) were recorded on 22nd September planting at spacing of 30 x 30 cm.

Maximum fruit weight and yield was observed with the application of recommended dose of nitrogen in four split doses (40:20:20:20) during February, April, July and September in Kinnow. Application of phosphorus in two splits (50:50:0:0) decreased fruit drop.

Control of twig blight/anthracnose in citrus is achieved by the spray of Bordeaux mixture (after fruit harvest) + carbendazim 0.1% (mid April) + copper oxychloride 0.3% (mid August).

Heading back of Umran ber trees at 2 m from the point of emergence of main limbs resulted into maximum fruit yield (48 kg/plant) with better quality fruits.

In guava cv. Hisar Safeda, maximum survival (63.3%) was recorded when the wedge grafting was done during 2nd fortnight of February.

Fusarium wilt of gladiolus can be controlled up to 72% by dipping corm in carbendazim (0.2%) + soil drenching.

Vegetable Crops

The State Variety Release Sub-Committee has recommended for release the brinjal variety **HLB-12** (429.3 q/ha) having tolerance to shoot and fruit borer (16%).

Coriander variety **DH-220,** fennel (saunf) variety **HF-143** has been recommended in AICRP (Spices) workshop for release at national level and ajowain var. **HAJ-18** for state level.

An edible-podded pea variety **HVPe-3-5** (102.5 q/ha), turmeric variety **Hisar Kanchan** (87.50 q/ha) and methi variety **Hisar Manohar** (20.6 q/ha) have been identified by the University Variety Release/Identification Committee for farmer field trials.

Okra variety **HB-03-25-2** (125 q/ha) has been recommended for release by the University Variety Identification/Release Committee as suitable for dehydration and having resistance to YVMV disease.

Early sown potato crop (15th and 30th September) under micro sprinkler irrigation system produced 112 and 133% higher yield after 75 days of planting and 74 and 102% higher yield after 90 days of planting as compared to furrow irrigation method, respectively.

Application of Goal @ 900-1200 ml/ha before planting + one hand weeding at 40-60 days after transplanting gave maximum marketable bulb yield (191 q/ha) and recommended by AINRP (Onion & Garlic) for Zone II (Haryana, Rajasthan and Delhi).

Radish variety Hisar Selection-1 gave maximum yield (290 q/ha) when sown in last week of September and Punjab Safed yielded maximum (180 q/ha) when sown in second week of September.

Coriander DH-220 (15 q/ha), fennel (saunf) HF-143 (17 q/ha), ajowain HAJ-18 (14 q/ha), potato Kufri Frysona (355 q/ha), Kufri Gaurav (400 q/ha) and Kufri Garima (420 q/ha), a small fruited round type brinjal hybrid PBHSR-31 (310 q/ha) and pea variety P-89 (115 q/ha) have been included in package of practices.

Recommendations on use of sodic water after 100% neutralization of RSC alongwith FYM @ 20 t/ha included in package of practices for growing different vegetable crops, *i.e.*, tomato, onion, cabbage, cauliflower, knol-kohl, broccoli, bottle gourd, ridge gourd, bitter gourd, okra and guar.

Higher yield of potato varieties K. Bahar (24.6%) and Kufri Badshah (22.8%) with micro sprinkler irrigation at 100% of 10 mm CPE was obtained as compared to furrow irrigation method. The total yield with micro-sprinkler system at 60% of 10 mm CPE was at par with furrow irrigation method, which saved 32% water. Recommendations included in package of practices.

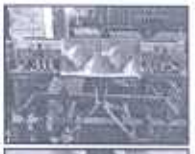
Agricultural Economics

On the basis of a study on the Impact of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on Agriculture in Hisar district, It is recommended that MGNREGS be linked with agriculture through suitable policy interventions, develop cost effective farm machinery for different size of land holdings and there should be a provision of custom hiring of machines at reasonable rates.

Pre-sowing and pre-harvesting price forecast of cotton and basmati paddy were made and disseminated the price forecast through print and electronic media. More than 90 per cent validation of price forecasts was observed.

Agricultural Engineering and Technology

Farm Machinery and Power Engineering



The tractor drawn ridger seeder alongwith *Bt.* Cotton metering attachment gave germination in the range of 24 to 26 plants per 10 metre length and increased yield by 10%.

A water application mechanism with sowing machine was designed and developed for timely sowing. The water application rate was fixed at 2222 l ha^{-1}. Yield in water application attachment on seed drill was 16, 35 and 22 % higher than ridger seeder, hand plough and seed drill, respectively.

Sugarcane trash shredder (leaf chopper) was tested and quality of mulch and spreading of trash was uniform and satisfactory. Field efficiency of machine was 76.5 to 80.8% with width of shredding from 1.72 to 1.78 m.

Front line demonstrations of straw baler revealed that its field capacity was 0. 4 ha/hr with baling efficiency of 82%. The net return from one hectare of paddy straw was Rs. 1790.

Paddy transplanter gives 10% higher grain yield and 32% higher net returns as compared to manual transplanting. The percent saving in labour and cost were 95 and 54, respectively in paddy transplanter as compared to manual transplanting.

Wheat sowing with happy seeder gave 8.7% higher yield and 23.8% higher net returns as compared to conventional sowing. Saving in time, fuel, labour, cost of sowing and energy requirement with the use of happy seeder was 78, 68, 77, 73 and 70% as compared to conventional sowing.

Fuel consumption reduced by 5.0, 5.2, 7.1 & 5.4% at idle speed (700 rpm), at rated speed (2000 rpm), repeated acceleration and deceleration & at fixed load (disc harrowing), respectively when the fuel catalyst was installed in the tractor.

Root crop harvester performed satisfactory in potato and onion. However, in carrot the performance was not satisfactory. In potato, onion and carrot the digging efficiency was 95 to 97% and in onion it was 100%.

The effectiveness of the insecticide spray by aero blast sprayer in guava was 92.5% with 9.8% less infestation as compared with the gun type sprayer.

Front line demonstrations of multicrop planter were conducted in field pea, mustard, Bengal gram and wheat at different locations in 9.5 acres. Seed emergence ranged between 81 to 85%. Average plant population per square metre was 13, 16, 19 and 230 in field pea, mustard, Bengal gram and wheat, respectively.

Soil & Water Engineering

Performance evaluation of drip irrigation system was carried out in cotton at farmers' fields. The emission uniformity varied from 88 to 92% in different fields which indicate an optimum design and proper management of the installed drip irrigation systems.

Surface and subusrface waterlogging conditions in Rohtak district was studied and analysed. Majority of surface waterlogged area was underlain with water table depth of 3-10 m. The network of observations wells for the monitoring of water table depths need to be

strengthened. Most of the surface waterlogged problem areas were 500 m away from the canals, indicating that direct loss of water from canals was not major factor responsible for it. Existing surface drains in the study area are, in general, quite effective in controlling both surface and subsurface waterlogging problems in the vicinity of the drains.

Processing and Food Engineering

Mulhati-guava bar/nuggets were prepared and found most acceptable. The cost of production was Rs. 120/kg.

The garlic clove peeler was tested. The output capacity, peeling efficiency and bruising was 50 kg/hr, 70%, and 9%, respectively with an operational cost of Rs. 65/hr.

The garlic grader was tested. The output capacity and operational cost were found as 85.7 kg/hr and Rs 31.4/hr respectively.

The solar hara was demonstrated in ten villages of Hisar and Bhiwani districts. Overall assessment of solar hara at rural site showed that users were satisfied with the performance but they wanted subsidy on solar hara for purchasing it.

Portable floating drum type of biogas plants of 2 m^3 capacity were evaluated. These biogas plants were quite easy to operate and maintain with 30% diesel saving. The daily biogas production during February to April varied between 650 liters to 1103 liters.

BASIC SCIENCES

A total of 2,20,648 vials (50 ml each) of liquid biofertilizers namely Azoteeka (63,659), Phosphoteeka (1,12,447) and Rhizoteeka (44,542) were produced and sold. Also 674 vials of Bioteeka (*A. chroococcum* HT-54) were supplied to farmers for control of nematode infection in wheat.

Salinity tolerant strain of *Azotobacter* ST-3 and *Pseudomonas* sp. P-36 increased yield of wheat by 6.1% over uninoculated control.

Application of biogas slurry to saline water irrigated field increased yield of wheat by 9.1% as compared to canal irrigated field (7.6%). The inoculation of salinity tolerant strain along with biogas slurry increased the yield by 11.5%.

On the basis of 8 biofertilizer (Azoteeka + Phosphoteeka) trials at farmer's field, the increase in wheat yield was recorded as 3.8 - 5.6%. While, on the basis of 10 trials of biofertilizers in mustard at farmers' field the increase in yield ranged from 2 - 7%.

PGPR strain BSY 101 (Hisar) alongwith rhizobial inoculation showed highest increase of 18.0% in grain yield of chickpea as compared to 13.4% with standard PGPR strain LK 884.

Supplementation of spent mushroom waste @ 2% alongwith cattle dung to biogas plants produced 23% more biogas over control.

In the field, the total biomass of micropropagated plants of Stevia was more than the seed raised plants. The survival rate of regenerated plantlets was more than 80%. *Brassica juncea* x *B. alba* derived advanced lines (F6 generation) developed through embryo rescue, with resistance against Alternaria blight have been identified. Transgenic *Bt* tomato cv. Hisar Arun plants developed through Agrobacterium mediated transformation

Promising HKR 47 x MAS 26 (aerobic) F3 and Pusa 1121 x MAS 25 (aerobic) F4 plants have been selected on the basis of aerobic root morphology, molecular profile and/or agronomic performance.

Real time PCR analysis showed higher up-regulation of heat shock protein genes (HSP101 a, b & c) under heat shock in thermotolerant wheat varieties, WH 730 and WH 1021 as compared to susceptible varieties (WH711 and WH147).

A SCAR marker for identification of sex in *Simarouba glauca* has been developed (Patent application submitted).

Ecofriendly process for PHB production was scaled up to 500 lit. The cost of production of PHB reduced by adopting potato peal based growth media and non aseptic inoculation at high inoculums concentration improving PHB yields from 56 to 72%.

Developed functional edible coating for increasing the shelf life of ber and guava fruits.

Cheese and toffee prepared by blending guava: mango pulp in different ratios was highly acceptable up to 3 months of storage.

Jam and Chutney prepared by combining guava and jamun pulp was highly acceptable.

Ready to eat nutritious extruded snacks were prepared from maize hybrids HQPM-1 and HQPM-7.

Underutilized pulses can be processed to prepare flour, protein concentrate and protein isolates. The flour protein concentrate and isolate can be incorporated upto 50, 25 and 10% along with 10% oat flour to prepare value added RTE snacks rich in fibre and protein.

Pretreatment of ber fruits *viz.* Umran (shelf life 8 to 9 days) and Kaithali (shelf life 4 to 5 days) with GA_3 decreased the degradation of cell wall of fruits.

Aerobic rice varieties performed better under water deficit condition as compared to conventional *indica*/Basmati varieties which may be due to higher proline, free amino acids and/or reducing sugars.

High temperature caused hastening of flowering by 12 days and physiological maturity by 25 days in late sown as compared to normal sown conditions in chickpea.

Heat tolerant chickpea genotypes H07-03, H07-120, H08-71, H08-93, H08-75, H05-10, HC-1 and HC-5 also happened to be drought tolerant.

Spraying with *Beauveria bassiana* at 10^{10} spores ml^{-1} and 10^{8} spores ml^{-1}, resulted in a reduction of 67.77 and 58.42% in *Tetranychus urticae* population in cucumber.

HOME SCIENCE

The rural women perceived value added pearl millet products technology as culturally compatible, triable and profitable with low investment and low labour cost.

Products prepared by using gluten free composite flour incorporating cauliflower green powder were superior in quality as compared to other leafy powder.

Consumption of cereals, pulses, green leafy vegetables, milk and milk products, fats and oils, sugar and jaggery were inadequate in the diets of rural school children of Hisar, Fatehabad and Rohtak districts.

MOUs were signed with DKS Incorporate, Hisar and Kamboj Foods Pvt. Ltd., Indri, Karnal for value added products of pearl millet.

User friendly appropriate workstation for *aonla* pricking machine was developed.

Tericot fabric (50:50) cot bag was found most acceptable in terms of appeal, texture, durability and comfort.

ACHIEVEMENT OF RDS SEED FARM FOR THE YEAR 2012-13

Crops	Area (Acres)	Production (qtls)	Seed Production (qtls)			
			Foundation	Certified	TFL	Total
Kharif 2012						
Guar	719.8	484.5	14	173.3	94.55	281.85
Moong	423.0	163.8	11	10.8	90.5	112.30
Sorghum	12.0	5.0	-	-	3.5	3.50
	1154.8	**653.3**	**25**	**184.1**	**188.55**	**397.65**
Rabi 2012-13						
Wheat	411	4698.6	-	2710.0	397.5	3107.5
Barley	60	370.5	-	-	261.2	261.2
Oats	24	38.8	-	12.4	-	12.4
Gram	69	171.5	26	-	107.0	133.0
Raya	504	1264.5	-	464.5	92.5	557.0
	1068	**6543.9**	**26**	**3186.9**	**858.2**	**4071.1**

Income:

Scheme	RF-12	RF-27	F-6 Plan	F-5 N.P.	Total
Income (Rs.)	3160001	4402826	11601845	119374	19284046

Training: Farmers training was organized on "Quality Seed Production" by this office for 60 farmers of Haryana from 05.02.2013 to 16.02.2013, which was sponsored by ICAR.

EXTENSION:

Agricultural Officers' Workshop:

Agricultural Officers' Workshop, a bi annual feature (one for Kharif and one for Rabi crops), provides a forum for discussing the problems faced by the field staff with the university scientists about crops, animal husbandry and then to finalize the package of practices based on the experiences of field staff and research findings. Agricultural Officers' Workshop for Rabi crops was organized on 14-15th September, 2012 where as for Kharif crops it was organized on April 26-27, 2013.

Horticultural Officers' Workshop:

Horticultural officers' workshop was organized on February 8-9, 2013 in collaboration with the Department of Horticulture, Govt. of Haryana once in two years to finalize the package of practices for fruits, vegetable, flower, medicinal aromatic plants based on the experiences of field staff and research findings. Fruit and vegetable crops scenario is overviewed by the field functionaries and the University Scientists to determine the extension strategies of the state.

Krishi Mela:

A three-day Regional Agriculture Farm Darshan (Krishi Mela) was organized from 12th to 14th September, 2012 to show the field trials and experiments conducted on various Kharif crops. For the first time in September, an Agro-Industrial Exhibition was organized in which about 200 firms of Govt./Semi Govt.& Private Organizations dealing with agriculture and its allied sciences displayed their products. The Krishi Mela was sponsored and funded by the Ministry of Agriculture, Department of Agriculture & Cooperation, Govt. of India, and New Delhi under the Plan Scheme "Extension Support to Central Institute / DOE". The major activities arranged were scientists-farmers' meet (Buzz Session), farmers' guided visits, seed sale, water & soil testing, crop competition, dummy demonstrations, sale of university publications etc. About 49,000 farmers from Haryana and adjoining State of Punjab, Rajasthan, Delhi, Uttar Pradesh, Uttrakhand, Jammu & Kashmir, Madhya Pradesh and Himachal Pradesh attended the Krishi Mela. The seeds of improved varieties of rabi crops worth Rs. 63,34,000/- and university publication worth Rs. 93,160/- were sold. The soil samples (321) and water samples (343) were also tested. The Bio-fertilizer units (Rhizobium & Azotobactter) amounting Rs.1,76,400/- were sold during the Krishi Mela.

Krishi Mela:

Two days Krishi Mela was organized from 13th to 14th March, 2013 to show the field trials and experiments conducted on various Kharif crops. An Agro-Industrial Exhibition was organized in which about 265 firms of Govt./Semi Govt.& Private Organizations dealing with agriculture and its allied sciences displayed their products. Dr.K.S.Khokhar, Hon'ble Vice-Chancellor of the University inaugurated the Krishi Mela. The major activities arranged were scientists-farmers' meet (Buzz Session), farmers' guided visits, plant clinic, seed sale, water & soil testing, crop competition, dummy demonstrations, sale of university publications etc. About 36,000 farmers from Haryana and adjoining State of Punjab, Rajasthan, Delhi, Uttar Pradesh, Uttrakhand, Jammu & Kashmir, Madhya Pradesh and Himachal Pradesh attended the Krishi Mela. The seeds of improved varieties of Kharif crops worth Rs. 16, 34,660/- and university publication worth Rs. 94,375/- were sold. The soil samples (190) and water samples (185) were also tested. The Bio-fertilizer unit (Azotobacter) amounting to Rs.1,81,000/- were sold during the Krishi Mela. Horticultural plants were also sold to the tune of Rs.18000/- during Krishi Mela.

Kisan Divas:

Kisan Divas was organized on 23rd December, 2012 which was inaugurated by Sh.Paramveer Singh, Hon'ble Agriculture Minister, Govt. of Haryana. A large number of farmers from different districts of Haryana attended the Kisan Divas.

Vocational Trainings:

During this period, 321 Vocational trainings were organized by KVK, in which 3460 male and 1502 female farmers of general categories and 1645 male and 3012 female farmers of SC/ST categories participated. In total 9619 people got benefited from the various trainings on mushroom, bee keeping, fruits and vegetables preservation, dairy farming, cutting and tailoring etc.

Demonstrations: Method demonstrations to the tune of 796 were organized by KVKs to transfer the technical 'know-how' to the farmers.Similarly,1099 front line demonstrations and 186 adoptive research trials were also conducted by the KVKs for the benefit of the farmers and other stock holders.

Field Day: KVKs organized 134 field days to show and demonstrate the performance of improved technology which was attended by about 5666 participants.

Kisan Mela/Mini Kisan Mela: Kisan Mela/Mini Kisan Mela numbering 29 were organized by KVKs to depict improved technologies. The farmers to the tune of 15,339 participated and were benefited. These extension activities provided an opportunity to farmers to have live contacts with University/KVKs scientists for speedy solution of their farming problems.

Campaigns/Camps: As many as 203 campaigns and 17 camps were also organized by KVKs to educate farmers for adopting of latest technologies in which 20,018 and 821 participants were benefited respectively.

Other Extension Activities: Besides the above activities, KVKs organized 164 Kisan Goshthies/Training camps, 449 group meetings and 31 Udyan Goshthies /Gyan Diwas/Kheti Diwas for the benefit of the farmers.

Agricultural Technology Information Center (ATIC): The centre has sold seeds of improved varieties of various crops, bio-fertilizers, food products, honey and farm literature worth Rs. **53,31,971/-** during 2012-13. A total of 8432 beneficiaries were guided through personal contacts (3562) and toll free helpline (4870).

Farm Training Service (SNIATTE): From July 1st, 2012 to June 30th 2013, SNIATTE organized 46 trainings in various disciplines for a variety of clientele and benefited 1827 participants. Seven trainings were organized for SAO's/Extension personnel and benefited 265 participants. Likewise seven trainings were organized for SC and ST of Haryana State for Self-employment for 263 participants.

CCS Haryana Agricultural University, Hisar

Annexure-I

SCHEMATIC DETAILS
PROPOSED FINANCIAL OUTLAY FOR ANNUAL PLAN 2014-15

(Rs. in lakh)

Sr. No.	Name of the scheme	2013-14		2014-15	
		Revised Allocation	Anticipated Income	Proposed allocation	Anticipated Income
	TEACHING				
1	B-1 Strengthening of Instructional and Laboratory facilities in College of Agriculture, Hisar	72.98	0.00	62.74	0.00
2	***B-1-Part A. Competitive examinations and recruitment in service – Training in technical subjects for SC and ST candidates***	**0.20**	**0.00**	**0.30**	**0.00**
3	B.1-Part B. Admission of Bhutan Nationals in B.Sc. (Hons.) Agri. 4 Year-Programme for foreign students	0.00	0.00	7.07	0.00
4	B-I (b). Strengthening of Instructional and Laboratory facilities in College of Agriculture, Kaul	13.20	1.00	14.51	2.00
5	B-IV(a) Strengthening and upgrading the teaching facilities at College of Basic Sciences & Humanities	12.91	0.00	14.56	0.00
6	B-IV(b) Strengthening of computing including Internet connectivity & antivirus at CCSHAU, Hisar	30.00	0.00	33.00	0.00
7	B.IV(c). Upgradation of teaching and training facilities for UG and PG programmes in Centre of Food Science & Technology	1.21	0.00	1.33	0.00
8	***B.IV(d) - Fruits and Vegetable Processing***	**1.38**	**0.00**	**1.52**	**0.00**
9	B-V(a). Strengthening of Home Sc. Education with special reference to vocational training at College of Home Science	3.60	0.00	20.33	0.00
10	***B-V(b). Capacity building of scheduled caste women through developmental messages***	**9.00**	**0.00**	**9.50**	**0.00**
11	B-VI (a) Strengthening of facilities in O/o of Dean, Postgraduate Studies	42.80	0.00	49.37	0.00
12	B-VI (b) Strengthening of University Central Laboratory	4.85	0.00	5.32	0.00
13	***B-VI(c) Participation of post-graduate SC students in seminars / conferences etc.***	**1.00**	**0.00**	**1.00**	**0.00**
14	B-VII Strengthening and upgrading teaching facilities at College of Agril. Engg. & Technology	6.70	0.00	10.17	0.00
15	***D.Extn. 5(a) Awareness among schedule caste farmers about efficient water management technology including modern methods of irrigation and tube well pumps installation, operation and maintenance.***	**4.07**	**0.00**	**4.07**	**0.00**

16	***D.Extn. 5(b)Awareness among schedule caste farmers on agricultural implements repair and training on operation of tractors and improved agricultural machines like straw reaper, laser leveler, rotavator etc. for their effective utilization for custom hiring***	**4.07**	**0.00**	**4.48**	**0.00**
17	***D.Extn.5 (c) Hands on Training Programme for SC Youth in Sorting/ Grading of Horticultural produce***	**4.07**	**0.00**	**4.48**	**0.00**
18	D-Ext-8(a) Plan (Agri.) Strengthening facilities at Directorate of Human Resource Management	12.10	5.00	12.10	3.50
19	D-Ext-8(b) Plan (Agri.) Upgradation of Human Resource for agricultural education and research in emerging areas	8.00	0.00	8.00	0.00
20	D-Ext-8(c) Plan (Agri.) Strengthening of IPR Cell	0.27	0.00	6.66	0.00
21	D-Ext-8(d) Plan (Agri.) Providing hospitality under exchange programme	2.00	0.00	2.00	0.00
22	E-Lib. 1 Nehru Library : Subscription for journals and Purchase of books etc. and Strengthening of automation in the Library	195.66	2.00	219.23	2.20
23	E-Lib. II Night reading facility at Nehru Library	1.65	0.00	1.81	0.00
24	**E-Lib. III *Purchase of books and membership of professional societies for SC students***	**10.00**	**0.00**	**10.00**	**0.00**
25	B –X. Plan(Agri.) Ad hoc Provision for Power supply and participation of faculty in national seminars/ conferences/ workshops etc.	150.00	0.00	150.00	0.00
26	B – XI- Plan(Agri.). Provision for unforeseen academic requirements	405.26	0.00	375.77	0.00
27	B-XII Plan (Agri.). Maintenance & Strengthening of computer networking at CCSHAU, Hisar	40.00	0.00	40.00	0.00
28	B-XIII. Plan(Agri.). Exchange of students and faculty to collaborating foreign universities	8.00	0.00	8.00	0.00
	Sub-Total:	**1044.98**	**8.00**	**1077.32**	**7.70**
RESEARCH					
29	Dte-R-1. Strengthening of Administrative facilities in Directorate of Research.	10.90	0.00	10.97	0.00
30	Dte-R-2. Provision for unforeseen research requirements.	26.62	0.00	29.28	0.00
31	Dte-R-3. 25% matching State share for AICRP and other schemes on sharing basis and provision for gratuity and leave salary to staff retiring from ICAR and other agency schemes	1142.03	0.00	1174.52	0.00
32*	Dte.R-4-Research Planning, coordination, monitoring, evaluation and guidance at CCSHAU, Hisar	239.99	0.00	280.42	0.00
33**	Dte.R-5-Anticipated ADA liability for research schemes converted from Non-Plan to Plan	383.43	0.00	348.86	0.00
	Sub-Total:	**1802.97**	**0.00**	**1844.05**	**0.00**

	College of Agriculture, Hisar				
34*	Agrimet-1-Agro-Meteorological studies in Haryana	40.88	0.00	55.70	1.00
35	Agro.1. Vermi composting of animal wastes	2.90	0.15	3.19	0.17
36	Agro.2 Improving Wheat productivity by seed priming and seed inoculation VAM fungi	3.13	0.00	3.17	0.00
37*	Agron.3-Agro Ecosystem Agronomic Research (A) Weed management, herbicide resistance & herbicide residues and resource conservation; (B) Sustainable agriculture, diversification and agronomic practices of different field crops	320.00	1.00	287.39	13.14
38*	Econ.1- Economic studies into emerging marketing and production problems related to Haryana farming.	145.17	0.00	144.79	0.00
39*	Ento.1-Management of harmful and beneficial insects for sustainable Agriculture in Haryana	111.00	0.50	183.16	0.44
40	Extn.1. Extension mechanisms for sustainable diversified agriculture	0.34	0.00	0.41	0.00
41*	EE-2-Constraints in adoption of diversification in agriculture	17.88	0.00	22.40	0.00
42*	FF-1-Plan (Agri) : Research on Farm Forestry, Nursery Development and management	41.57	0.70	47.90	0.80
43*	DLA-1-Plan (Agri) : Sand Dunes Stabilization and their management	60.19	1.00	62.34	1.00
44	Hort.1. Marigold (Tagetes species) Commercial flower crop in Haryana	1.35	0.12	1.49	0.10
45*	Hort.2-Improvement production and storage technology in fruit crops	285.08	10.89	329.82	8.50
46*	Hort.3- NARP strengthening of regional research station, Buria	43.80	7.00	46.79	6.38
47	Nemat.1. Biological control of insect pests of crops by entomopathogenic nematodes.	1.07	0.00	1.18	0.00
48*	Nem.2-Survey surveillance identification evaluation of crop losses and management various crops	45.82	0.00	75.23	0.00
49*	PB-1- Development of wheat varieties for low and medium input conditions	490.62	0.80	638.79	0.90
50	Genet.1. Molecular diversity analysis, host pathogen interactions of Karnal bunt (Neovossia indica) pathogen and its impact on end user wheat quality	2.40	0.00	2.68	0.00
51	Genet.2. Genetic studies on dwarfing genes vis-à-vis lodging resistance in bread wheat (*Triticum aestivum L*)	1.24	0.00	1.37	0.00
52*	Genet-3-Genetic studies on crop plants and agriculturally important microorganisms	144.02	0.00	172.95	0.00
53	PP-1. Promotion of mushroom cultivation as an entrepreneurial activity in Haryana.	0.48	0.05	0.54	0.00
54*	PP-2- Studies on economically important plant diseases and mushroom production technology	150.28	1.25	160.75	1.25

55*	SST-1- Breeder Seed Production of different crops/varieties(Earlier PB-3).	136.67	40.00	176.95	40.00
56*	Soil-1-Natural Resource Management for Sustainable Agriculture	393.61	0.00	486.34	0.00
57	Veg.1. Research on improvement and production of vegetables and spice crops	1.35	0.30	3.40	0.30
58*	Veg.2- Research on Improvement and production of vegetables and spice crops	235.10	0.00	238.18	0.00
59*	CRS-1-Research on cotton and cotton based cropping system	113.74	13.62	175.85	14.30
60*	RSB-1- Technology generation and refinement for different farming systems for South West Haryana	389.28	13.00	566.69	18.00
61*	RSKaul-1- Improvement of rice and rice based cropping systems	254.08	12.00	392.24	13.00
62*	RSK-1-Research on Sugarcane & Sugarcane based rice/wheat/maize cropping system	371.12	20.00	464.97	18.00
63	RRS.1 – Rohtak - Survey of yield losses due to temporary flooding, extent of flood and rise in water table in Rohtak zone	7.42	0.00	1.16	0.00
64*	RSR-2-Soil, water and crop management in Eastern Semi-Arid sub zone of Haryana (Rohtak, Jhajjar, Sonipat and Faridabad)	49.36	1.00	64.42	1.00
	Sub-Total:	**3860.95**	**123.38**	**4812.24**	**138.28**
	College of Basic Sciences & Humanities				
65	Biochem.1. MIcrobial biocatalyst(s) for food processing industry	2.33	0.00	2.77	0.00
66*	BC-2-Bio-chemical studies in relation to improvement of field, vegetable and fruit crops	45.38	0.00	102.16	0.00
67	BMB-1. Development of abiotic stress tolerance crop using transformation and marker assisted selection	3.25	0.00	3.75	0.00
68	BMB- 2 Development of nutritionally-dense crops via marker-assisted selection	3.80	0.00	4.30	0.00
69	BMB – 3 Markers-assisted selection in Basmati Rice Breeding for bacterial leaf blight resistance	3.80	0.00	4.30	0.00
70*	BMB-4-Application of biotechnology and molecular biology for plant multiplication and improvement.	117.71	0.00	154.82	0.00
71	BIF-2. Multimedia databases of crop plant diseases and pests.	0.44	0.00	0.48	0.00
72	BIF-3 Data Mining and gene annotation in rice genome	0.79	0.00	0.87	0.00
73	Bot.1. Physiological screening of pigeonpea and wheat germplasm for low input conditions	1.07	0.00	1.18	0.00
74*	Bot-2-Mopho-physiological studies in important crops of Haryana for improving productivity under different environmental conditions	40.62	0.00	72.75	0.00

75	CP-1 Evaluation of compounds of plant origin and synthesis of organic compounds for biological activity	2.91	0.00	3.23	0.00
76	FST-1. Strengthening of R&D facilities for food processing	3.11	1.00	3.40	0.10
77*	FST-2- Food processing technology for promotion of plant products	0.43	0.00	0.48	0.00
78*	Math.& Stat.-1 Determination of field plot techniques estimation and forecasting of yields of major crops in Haryana	38.33	0.00	41.22	0.00
79	Micro.1 Co-compositing of rice straw with different agro industrial wastes and its enrichment for crop production	2.84	0.00	3.16	0.00
80*	Micro.2 Development and improvement of micro-organisms for use in agriculture, industry and environment	94.40	0.00	159.08	0.00
81*	Soc.1 -Impact of agricultural technology on the socio-economic status of rural society in Haryana	12.44	0.00	20.68	0.00
82	Soc.2 - Sociological analysis of crime with reference to rural women in Haryana	4.45	0.00	4.45	0.00
83	Zool- 1- Utilization of some exotic species of earthworm for the production of vermicompost and its utilization in agriculture and fish production	2.79	0.00	3.07	0.00
84*	Zool.2-Ecology and management of mite and vertebrate fauna of agricultural importance	24.00	0.00	31.98	0.00
	Sub-Total:	**404.89**	**1.00**	**618.13**	**0.10**
	College of Home Science				
85	CT-1 Development of Protective Clothing for Farm Workers and Rural Women	0.62	0.00	0.70	0.00
86*	CT-2-Development of Stylized designs of apparels for women employment	13.62	0.00	5.98	0.00
87	FRM-1 Development and propagation of household waste management technologies for sustainable environment	0.49	0.00	1.16	0.00
88*	FRM-2-Energy conservation technologies, their impact on family resources and environment	4.72	0.00	5.12	0.00
89	HDFS-1 Learning competencies among preschool children	3.87	3.37	2.60	3.37
90*	HDFS-2-Social Development of Children and Adolescents	15.45	0.00	16.15	0.00
91	HDFS-3-Childhood Aggression and its management	1.70	0.00	1.90	0.00
92	HSEE-1 Empowering rural women through entrepreneurial activities	0.94	0.00	1.84	0.00
93*	HSEE-2-Action Research on capacity building of farm women through technological interventions	13.13	0.00	33.84	0.00

94	FN-2 Popularization of Developed Technologies and to impart Nutrition Education related to technologies	1.97	0.00	2.14	0.00
95*	FN-3-Assessment and improvement of nutritional status of masses of Haryana.	0.14	0.00	0.16	0.00
	Sub-Total:	**56.65**	**3.37**	**71.59**	**3.37**
	College of Agril. Engg. & Technology				
96	APE-1. Testing and popularization of small scale agricultural processing equipments for their adoption in Haryana state	2.14	0.00	2.36	0.00
97	APE-2 Testing and popularization (including training) of renewable energy & energy efficient technologies for their adoption in Haryana State	2.06	0.00	2.27	0.00
98*	AE-1-Development, Testing and Popularization of Agril. Machines and Implements	11.22	0.00	22.52	0.00
99*	SWE-1- Monitoring and Evaluation of surface and sub surface water table and control of Soil salinity	11.77	0.00	18.39	0.00
	Sub-Total:	**27.19**	**0.00**	**45.54**	**0.00**
	FARMS				
100	F-1. Plan-Agri. Crop Farm	115.59	12.00	102.95	12.00
101	F-6. RDS Seed Farm Agri. Strengthening of Seed Production Programme at RDS Seed Farm	109.56	173.00	166.52	173.00
	Sub-Total:	**225.15**	**185.00**	**269.47**	**185.00**
	EXTENSION EDUCATION				
102	D- EXT-1- Strengthening of facilities for transfer of technology	90.19	0.00	54.15	0.00
103	D- Extn - 2. Strengthening of Publication Unit	8.80	2.50	10.00	2.50
104	***D.Extn.3. Skill improvement in agricultural technology for SC & ST communities for employment generation.***	**7.98**	**0.00**	**8.77**	**0.00**
105	***D.Extn.4. Improving the Livelihoods of Schedule Caste and Schedule Tribe Farmers of Haryana***	**361.18**	**0.00**	**408.18**	**0.00**
	Sub-Total:	**468.15**	**2.50**	**481.10**	**2.50**
	DIRECTION AND ADMINISTRATION				
106	A-1 (a). Strengthening of Vice-Chancellor office	12.00	0.00	12.25	0.00
107	A-2 (a). Strengthening of Registrar office	57.20	0.00	90.14	0.00
108	***A-2 (ii) Book grant to children/wards of university employees belonging to SC categories***	**2.50**	**0.00**	**2.75**	**0.00**
109	A-3 - Strengthening of Comptroller's office including audit fee	127.00	0.00	139.58	0.00
110	A-3(ii). Pension including LTC requirements for retirees	8000.00	0.00	8660.00	0.00
111	A-6. Strengthening of Store & Purchase Organization	1.05	0.00	1.16	0.00
	Sub-Total:	**8199.75**	**0.00**	**8905.88**	**0.00**

	WEFLFARE AND SERVICES				
112***	A-4(a) Strengthening of Directorate of Students Welfare	502.20	0.00	202.36	0.00
113	A-4(b) Strengthening of Counseling and Placement Cell	1.40	0.00	1.45	0.00
114	A-4(c) Strengthening of Campus School, Kaul	1.00	0.10	1.15	0.10
115	**A-4(c)(i) *Book grant to SC students studying in the Campus School, Kaul***	**0.05**	**0.00**	**0.25**	**0.00**
116	***A-4(c)(ii). Book grant to SC students studying in the Campus School, Hisar***	**1.50**	**0.00**	**1.50**	**0.00**
117	A-4(c) (iii) Strengthening of Campus School, Hisar	0.05	0.00	3.00	0.00
118	***A-4(d). Enhancing Soft, IT and Interview Skills in SC & ST students of CCSHAU, Hisar.***	**3.00**	**0.00**	**3.20**	**0.00**
119	A-5(b)(i). Construction, maintenance and water supply	414.50	6.60	590.75	5.00
120	A-5(b)(ii). Repair and renovation of university buildings and roads	100.00	0.00	150.00	0.00
121	A-5(b)(iii). Replacement of old electric generators to maintain round the clock power supply for smooth conduct of research & education.	51.62	0.00	82.00	0.00
122	A-5(c) (i) Strengthening of facilities for landscaping	13.68	0.70	15.37	0.70
123	A–7. Strengthening of Security Organization	139.72	0.00	153.68	0.00
124	A-8. Strengthening of medical facilities at Campus Hospital, Hisar	13.35	0.10	14.82	0.10
125	A-9 Loans and Advances	0.00	2.00	0.00	2.00
	Sub-Total:	**1242.07**	**9.50**	**1219.53**	**7.90**
	Grand Total:	**17332.75**	**332.75**	**19344.85**	**344.85**
	(-) Anticipated income:	**332.75**		**344.85**	
	Net Plan Size:	**17000.00**		**19000.00**	

* Research schemes converted from non-plan to plan and includes salary component also.

** Scheme meant for anticipated ADA liability for research schemes converted from Non-Plan to Plan.

*** includes Rs. 200.00 lakh for the repairs/renovation of different buildings of more than 40 years' old hostels.

- Sub-Schemes in Bold represent SCSP component of the plan

DRAFT ANNUAL PLAN 2014-15 - PROPOSED OUTLAYS

ANNEXURE - I

(Rs. in lakh)

Sr. No.	Major Heads/ Minor Heads of Development	Implementing Agency State Govt./ Public Sector	Annual Plan 2012-13 Actual Expenditure	Annual Plan 2013-14		Annual Plan 2014-15		
				Approved Outlay	Antipated Expenditure	Proposed Outlay	Of which	
							Capital Content	Salary Component
1	2	3	4	5	6	7	8	9
1	2415 -Agril. Res. & education(Plan)/01 - Crop husbandary/277 - Education/[99] - Grant-in-aid to HAU	CCS Haryana Agricultural University, Hisar	12619.62	17000.00	17000.00	19000**	750.00	15903.16*

*Salary component includes Rs. 8660.00 lacs on account of pension to retirees

	**Head of Development	Proposed Outlay	Of which SCSP Component
1	Welfare Services	1219.53	
2	Teaching	1077.32	
3	Research	1844.05	
4	Crop Farm	269.47	
5	Direction and Administration	8905.88	
6	Extension Education	481.10	
7	College of Agriculture, Hisar	4812.24	
8	College of Basic Sciences & Humanities	618.13	
9	College of Home Science	71.59	
10	College of Agril.Engg. & Technology	45.54	
11	Less Income	-344.85	
	Total HAU	19000.00	460.00

Comptroller, CCS HAU, Hisar

30.1.14

Director, HRM, CCS HAU, Hisar

DRAFT ANNUAL PLAN 2014-15 - PHYSICAL TARGETS AND ACHIEVEMENTS (SCHEME-WISE)

ANNEXURE - II

Sr. No.	Item	Unit	Annual Plan 2012-13 Actual Achievement	Annual Pan 2013-14		Annual Plan 2014-15 Target (Proposed)	Remarks
				Target	Anticipated Achievement		
1	2	3	4	5	6	7	8
1	**2415 - Agril.Res. & Education (Plan)**/01- Crop Husbandry/**277 - Education/[99] - Grant-in-aid to HAU** /2415-Agril.Res. & Education (HAU)	CCS HAU, Hisar					

The University has only one scheme as mentioned above with three major activities, teaching, research and extension. These activities are continuous in nature and, therefore, as such the physical targets cannot be set for. However, these activities would be carried out meticulously and objectives fulfilled. The salient achievements of the scheme are given at Sr.No.3 (d) of the Memorandum Explanatory of the Plan Schemes (Pages 1-13).

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30-1-14

ANNEXURE - III

DRAFT ANNUAL PLAN 2014-15 -EXTERNALLY AIDED PROJECTS

(Rs. in lakh)

Sr. No.	Name, nature & location of the project with project code and name of external funding agency	Date of sanction/date of commencement of work	Terminal date of disbursement of external aid: (a) Original (b) Revised	Estimated cost (a) Orioginal (b) Revised (latest)	Pattern of funding (a) State's share (b) Central Assistance (c) Other sources (to be specified) (d) (Total)	Annual Plan 2012-13 Actual Exp. (a) State's share (b) Central Assistance (c) Other sources (to be specified) (d) (Total)	Annual Plan 2013-14		Annual Plan 2014-15 Proposed Outlay
							Approved Outlay	Antricipated Exp.	
							(a) State's share (b) Central Assistance (c) Other sources (to be specified) (d) (Total)	(a) State's share (b) Central Assistance (c) Other sources (to be specified) (d) (Total)	(a) State's share (b) Central Assistance (c) Other sources (to be specified) (d) (Total)
1	2	3	4	5	6	7	8	9	10
1	NIL								
2									
3									

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30.1.15

DRAFT ANNUAL PLAN 2014-15 - CENTRALLY SPONSORED SCHEMES - SHARING BASIS

(Rs.in lakh)

Sr. no.	Name of the scheme	Pattern of funding		Annual Plan 2012-13				Annual Plan 2013-14				Annual Plan 2014-15 Proposed Outlay		
		Central share	State Share	Releases			Total Actual Exp.	Releases			Total anticipated Exp.			
				Central Share	State share	Total		Central Share	State share	Total		Central Share	State share	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(a)	**Block Grants**													
1	Normal Central Assistance (NCA)													
2	One Time Addl. Central Assistance (OTACA)													
3	Special Plan Assistance (SPA)													
4	Special Central Assistance (SCA- untied)													
5	Hill Areas Development Programme (HADP)/Western Ghat Development Programme (WGDP)													
6	Tribal Sub Plan (TSP)													
7	Grants Under Proviso to Article 275 (1)													
8	Roads and Bridges													
9	North Eastern Council (NEC)													
10	Central Pool of Resources for North East & Skiikim													
11	Bodoland Territoirial Council													
12	ACA for Externally Aided Projects (EAPs)													
13	ACA for Left Wing Extremist (LWE) Districts													
	Sub Total of (a)													
(b)	**CSS-Flagship Schemes**													
1	Rashtriya Krishi Vikas Yojana (RKVY)													
2	Nirmal Bharat Abhiyan (NBA)													
3	National Rural Drinking Water Programme (NRDWP)													
4	National Health Mission (NHM)													
	Backward Region Grant Fund (BRGF)													
5	(i) District Component													
6	(ii) State Component													
7	Integrated Watershed Management Programe (IWMP)													
8	Rajiv Ghandhi Panchayat Sashaktikaran Yojana (RGPSY)													
9	Indira Awas Yojana (IAY)													
10	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)													
11	National Social Assistance Programme (NSAP)													
12	Pradhan Mantri Gram Sadak Yojana (PMGSY)													
13	National Rural Livelihood Mission (NRLM)													
14	Mid Day Meal (MDM)													
15	Sarva Shiksha Abhiyan (SSA)													
16	Jawaharlal Nehru National Urban Renewal Mission (JNNURM)													
17	Integrated Child Development Service (ICDS)													
18	Accelerated Irrigation Benefit Programme (AIBP) & other water resources programmes													
	Sub total of (b)													

NIL

DRAFT ANNUAL PLAN 2014-15 - CENTRALLY SPONSORED SCHEMES - SHARING BASIS

(Rs.in lakh)

Sr. no.	Name of the scheme	Pattern of funding		Annual Plan 2012-13				Annual Plan 2013-14				Annual Plan 2014-15 Proposed Outlay		
		Central share	State Share	Releases			Total Actual Exp.	Releases			Total anticipated Exp.			
				Central Share	State share	Total		Central Share	State share	Total		Central Share	State share	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(c)	**CCS-Other Schemes**													
19	National e-Governance Action Plan (NeGAP)													
20	Border Areas Development Programme (BADP)													
21	National Food Security Mission													
22	National Horticulture Mission													
23	National Mission on Sustainable Agriculture													
24	National Oilseed and Oil Palm Mission													
25	National Mission on Agriculture Extension and Technology													
26	National Plan for Dairy Development													
27	National Livestock Health and Disease Control Programme													
28	National Livestock Management Programme													
29	Assistance to States for Infrastructure Development for Exports (ASIDE)													
30	National River Conservation Programme (NRCP)													
31	National Afforestation Programme (National Mission for a Green India)													
32	Conservation of Natural Resources and Ecosystems													
33	Integrated Development of Wild Life Habitats													
34	Project Tiger													
35	Human Resource in Health & Medical Education													
36	National Mission on Ayush including Mission on Medicinal Plants							NIL						
37	National AIDS & STD Control Programme													
38	National Scheme for Modernization of Police and other forces													
39	National Urban Livelihood Mission													
40	Rajiv Aawas Yojana (MOHPUA)													
41	Rashtriya Madyamik Shiksha Abhiyan (RMSA)													
42	Support for Educational Development including Teachers Training & Audit Education													
43	Scheme for setting up of 6000 Model Schools at Block level as Benchmark of Excellence													
44	Scheme for providing education to Madrasas, Minorities and Disabled													
45	Rashtriya Uchchtar Shiksha Abhiyan													
46	Skill Development Mission													
47	Social Security for Unorganized Workers including Rashtriya Swasthya Bima Yojana													
48	Development of Infrastructure Facilities for Judiciary including Gram Nyayalayas													
49	Multi Sectoral Development Programme for Minotries													
50	National Land Record Management Programme (NLRMP)													

ANNEXURE-IV

DRAFT ANNUAL PLAN 2014-15 - CENTRALLY SPONSORED SCHEMES - SHARING BASIS

(Rs.in lakh)

Sr. no.	Name of the scheme	Pattern of funding		Annual Plan 2012-13				Annual Plan 2013-14				Annual Plan 2014-15 Proposed Outlay		
		Central share	State Share	Releases			Total Actual Exp.	Releases			Total anticipated Exp.			
				Central Share	State share	Total		Central Share	State share	Total		Central Share	State share	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
51	Scheme for Development of Scheduled Castes	NIL												
52	Scheme for Development of Other Backward Classes and denotified, nomadic and semi-ncmadic													
53	Scheme for Devleopment of Economically Backward Classes (EBCs)													
54	Pradhan Mantri Adrash Gram Yojana (PMAGY)													
55	National Programme for Persons with Disabilities													
56	Support for Statistical Strengthening													
57	National Handloom Development Programme													
58	Catalytic Development Programme under Sericulture													
59	Infrastructure Development for Destinations and Circuits													
60	Umbrella Scheme for Education of ST Students													
61	National Mission for Empowerment of women including Indira Gandhi Mattritav Sahyog Yojana (IGMSY)													
62	Integrated Child Protection Scheme (ICPS)													
63	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA)													
64	Panchayat Yuva Krida aur Khel Abhiyan (PYKKA)													
65	National Mission on Food Processing													
66	National Service Scheme (NSS)													
	Sub Total of (c)													
	Grand total (a) + (b) + ©													

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30-1-14

ANNEXURE-V-A

(Rs. in lakh)

SCHEDULED CASTE SUB-PLAN (SCSP) DRAFT ANNUAL PLAN 2014-15 - FINANCIAL OUTLAYS

			Annual Plan 2013-14				Annual Plan 2014-15 Proposed Outlay	
			Approved Outlay		Anticipated Expenditure			
Sr. No.	Major Head/ Sub-Head/ Schemes	Annual Plan 2012-13 Actual Exp. under SCSP	Total Outlay	of which flow to SCSP	Total Outlay	of which flow to SCSP	Total Outlay	of which flow to SCSP
1	2	3	4	5	6	7	8	9
1	2415 - Agril.Res. & Education (Plan)/01-Crop Husbandry/277 - Education/[98] SCSP Component - 789 Special Component Plan for Scheduled Castes for State Plan Scheme	308.60	17000.00	410.00	17000.00	410.00	19000.00	460.00

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30.1.14

ANNEXURE V-B

SCHEDULED CASTE SUB-PLAN (SCSP)
DRAFT ANNUAL PLAN 2014-15 - PHYSICAL TARGETS AND ACHIEVEMENTS

Sr. No.	Major Head/Sub - head/Schemes	Unit	Annual Plan 2012-13 Actual Achievement	Annual Plan 2013-14		Annual Plan 2014-15 Target (Proposed)
				Target	Anticipated Achievement	
1	2	3	4	5	6	7
	2415 - Agril.Res. & Education (Plan)/01-Crop Husbandry/277 - Education/[98] SCSP Component - 789 Special Component Plan for Scheduled Castes for State Plan Scheme	CCS HAU, Hisar				

Since the schemes meant exclusively for SCs involve teaching, trainings and grant of books, therefore, as such no physical targets can be set for . However, the set objectives would be followed meticulously and fulfilled. The salient achievements of the University have been given at Sr.No.3 (d) of the Memorandum Explanatory of Plan document (page No.4)

Comptroller, CCS H.

Director, HRM, CCS HAU, Hisar

ANNEXURE VI

DRAFT ANNUAL PLAN 2014-15 - PROPOSED OUTLAY
FINANCIAL OUTLAYS/EXPENDITURE FOR VOLUNTARY SECTOR

Sr. No.	Schemes	Annual Plan 2012-13 Actual expenditure	Annual Plan 2013-14		Annual Plan 2014-15 Proposed outlay
			Approved outlay	Anticipated expenditure	
1	2	3	4	5	6
1	NIL				
2					
3					
4					
5					
Total					

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30.8.14

ANNEXURE-VII-A

(Rs. in lakh)

WOMEN COMPONENT (WC)

DRAFT ANNUAL PLAN 2014-15 - FINANCIAL OUTLAYS

			Annual Plan 2013-14				Annual Plan 2014-15 Proposed Outlay	
			Approved Outlay		Anticipated Expenditure			
Sr. No.	Major Head/ Sub-Head/ Schemes	Annual Plan 2012-13 Actual Exp. under WC	Total Outlay	Of which flow to WC	Total Outlay	Of which flow to WC	Total Outlay	Of which flow to WC
1	2	3	4	5	6	7	8	9
1	2415 -Agril. Res. & education(Plan)/01 - Crop husbandary/277 - Education/[99] - Grant-in-aid to HAU	412.21	17000.00	478.05	17000.00	478.05	19000.00	2683.75

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar 30.1.14

ANNEXURE VII-B

WOMEN COMPONENT (WC)

DRAFT ANNUAL PLAN 2014-15 - PHYSICAL TARGETS AND ACHIEVEMENTS

Sr. No.	Major Head /Sub -head/ Schemes	Unit	Annual Plan 2012-13 Actual Achievement	Annual Plan 2013-14		Annual Plan 2014-15 Target (Proposed)
				Target	Anticipated Achievement	
1	2	3	4	5	6	7
1	2415 -Agril. Res. & education(Plan)/01 - Crop husbandary/277 - Education/[99] - Grant-in-aid to HAU	CCS HAU, Hisar				

The University has only one scheme as mentioned above with three major activities, teaching, research and extension. These activities are continuous in nature and, therefore, as such the physical targets cannot be set for. However, these activities would be carried out meticulously and objectives fulfilled. The salient achievements of the scheme are given at Sr.No.3 (d) of the Memorandum Explanatory of the Plan Schemes (Pages 1-13).

Comptroller, CCS HAU, Hisar

Director, HRM, CCS HAU, Hisar

Annexure-II

Justification for purchase of Bus (1 no.) for RDS Seed Farm

Sr. No	Name of Scheme	Name & No. of vehicles	Funds required (in lacs)	Justification
1.	F-6. RDS Seed Farm- Plan (Agri.) Strengthening of seed production programme at RDS Seed Farm (at Sr.No.101 of the Schematic Details)	One Bus	20.00	An amount of Rs.20.00 lacs have been demanded under SOE "M&V" for the purchase of one Bus against replacement purchase. There was one bus with RC No. HR 39 2470 25 seater for the purpose of transportation of field staff from main campus office to RDS Seed Farm. The said bus has been got condemned and disposed off through public auction vide auction notice no.327-3378 dated 28.09.2012. Presently the work is being managed by making a temporary arrangement by deploying the Exhibition van of Directorate of Extension Education. The farm is situated at a distance of about 20 KM from the main campus of the university. The field workers are to be transported from the main campus to the Farm as there is no arrangement of residences at the farm. The vehicle has to pass through the city of Hisar and National Highway No. 10. The exhibition van is not having sitting arrangement for the staff and also not passed for transporting manpower. It may invite legal implication in the event of any mishap. Thus, there is a strong need for purchase of bus for the said purpose in replacement of already auctioned bus referred above so that appropriate mode of conveyance can be made available for the staff. The approx. cost will be about 20 lacs.

Director, HRM 30.1.14

Comptroller, CCS HAU, Hisar