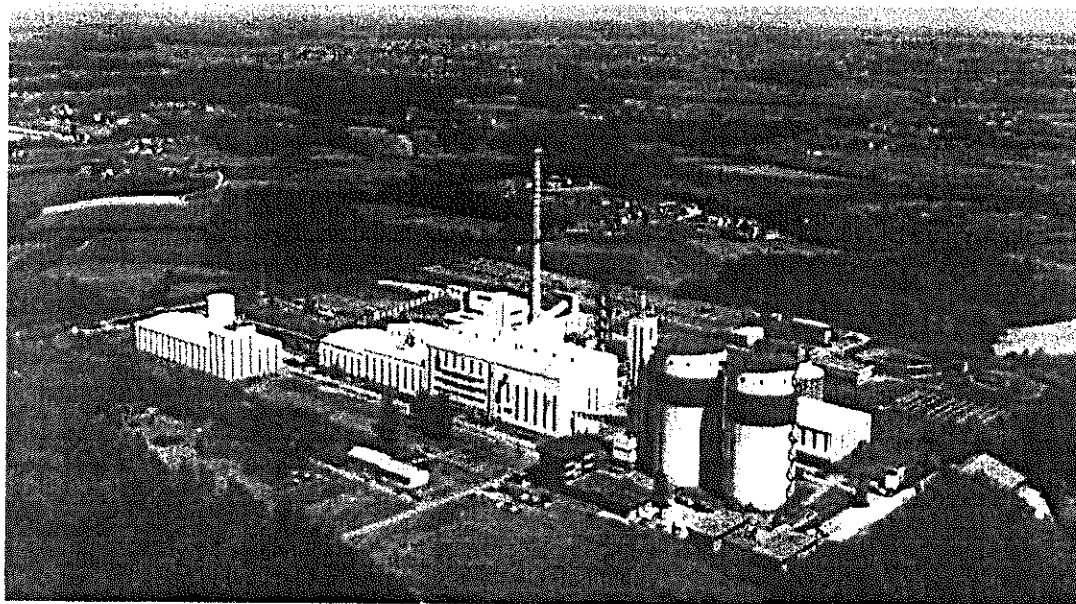


PREDINVESTICIONA STUDIJA

„FABRIKA ŠEĆERA BIJE LJINA“ a.d. Velika Obarska –u stečaju



Bijeljina, 19.03.2018.

Predinvesticiona studija "Fabrika šećera Bijeljina" AD

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Jasmin Gagula, 20.03.2020 15:25

PREDININVESTICIONA STUDIJA Šećerana Bijeljina - Ekonomski deo ; (31 - 172) - 16:05

Ova predinvesticiona studija je sačinjena na bazi Odluke odbora povjerilaca održane 08.02.2018.god u "Fabrika šećera Bijeljina" a.d. u stečaju kojom se želi dati predodžbu potencijalnim strateškim partnerima (kupcima) o mogućoj revitalizaciji fabrike, mogućnosti njenog budućeg rada i profitabilnosti proizvodnje šećera. Prema Odluci nosioci izrade su firma HAVREX d.o.o. Banja Luka, g-din Rade Rakić dipl. Tehnolog, g-din Slobodan Rakić, dipl. El.inženjer i g-din Fafulić Meho dipl. Tehnolog

Predinvesticionu studiju je uradio ekspertski tim u periodu februar-mart 2018. koji su sačinjavali :

- Pavlović Zoran, dipl.ecc., HAVREX doo, - vodja tima
- Željko Bogdanić, dipl.ecc., HAVREX doo, Banja Luka
- Rakić Rade, dipl.ing.teh.
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- Rakić Slobodan, dipl.el.ing.
- Nikolić Vojislav, dipl.el.ing.
- Faik Muhić, dipl.prav.

Napomena:

Deo tima, koji je uradio tehnički deo Predinvesticione studije u sastavu Rakić Rade, Fafulić Mirko, Rakić Slobodan i Nikolić Vojislav, ima puni autoritet i kredibilitet, jer su isti bili rukovodioci u fabrici pre rata, ali i rukovodeći tim za izvođenje remontnih radova i pripremu postrojenja u Fabrici šećera A.D. Bijeljina i obavljanje proizvodnje u kampanji 2010 godine, kojom su uspjeli da dobiju krajnji proizvod, odnosno šećer.

Izvršenim radovima, istovremeno su snimili i registrovali sve nedostatke za punu spremnost Fabrike šećera, da bi ista bila spremna da radi sa 100% projektovanog kapaciteta. Zato su pristupili izradi tehničkog dela ove Studije, kako bi se svi potencijalni kupci mogli upoznati sa potrebnim tehničkim i komercijalnim uslovima koje treba ispuniti u cilju obnavljanje proizvodnje u Fabrici šećera A.D. Bijeljina

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1. Elektronska verzija svih podataka potrebnih za Kapitalni remont fabrike (raspoloživo po zahtjevu)

Predinvesticiona studija "Fabrika šećera Bijeljina" AD

1. KRATAK ISTORIJAT „FABRIKE ŠEĆERA BIJEIJINA“ AD

Fabrika šećera Bijeljina izgrađena je i puštena u rad 1979. god. po konceptu firme „Polmex-checop“ iz Poljske. Projektovani kapacitet fabrike je 4000 t/dan prerade šećerne repe. Fabrika prvih godina proizvodnje nije mogla postići projektovani kapacitet, pa se pristupilo parcijalnom otklanjanju uskih grla u fabrici.

Rekonstrukcije su završene 1990. godine. Kampanja 1991. godine, po prvi puta je ostvarila rad projektovanim kapacitetom. Posle uspješne kampanje nastupio je rat na području Bosne i Hercegovine, ali ipak u ratu 1992. godine uspješno je odrađena kampanja.

Od 1993. god. do 2007. god. fabrika nije radila, ali su svi pogoni konzervisani i zaštićeni. Fabrika je prestala da radi i zatvorena bez dugova prema dobavljačima i poveriocima. U međuvremenu su radnici (koji nisu bili otpušteni) preuzeli obavezu čuvanja fabrike i bez isplate plata.

U toku stečajnog postupka 2009. god. fabriku je pokrenuo vlasnik, firma „Agrokop“ Export-import doo Banja Luka, sa ciljem da se obnovi proizvodnja.

Na obnovi proizvodnje strateški partner je angažovao ključne rukovodioce i radnika fabrike šećera te više specijalizovanih građevinskih, mašinskih i elektro preduzeća na remontu opreme i objekata. Planirani cilj strateškog partnera je bio da se fabrika pokrene i počne proizvodnja šećera i drugih nus proizvoda.

Kapaciteti šećerane su sa raspoloživim uloženim sredstvima u remontu osposobljena i puštena u rad 2010. godine. U probnoj kampanji, proizvodnji, prerađena je manja količina šećerne repe (oko 20.000 tona) i dobiven je šećer. Na taj način je ostvaren cilj strateškog partnera.

Kako bi se fabrika pokrenula u punom kapacitetu, u januaru 2011. godine stručni tim fabrike je pristupio izradi planova za kapitalni remont:

- planova za rekonstrukcije i prvi stepen modernizacije u oblasti elektro-energetskih postrojenja - automatizacije tehnološkog procesa,
- ugradnju nove opreme na filtraciji i pumpama za transport sokova i šećerovina,
- modernizaciju procesne i prijemne laboratorije te
- nabavku neophodne mehanizacije u odjeljenju unutrašnjeg transporta.

Sve ekspertske analize su pokazale da se za navedene poslove kapitalnog remonta mora planirati ulaganje od oko 20.060.336 KM (Poglavlje br.7. Rekapitulacija ukupnog ulaganja).

Radi nemogućnosti izmirenja poreskih obaveza Poreska uprava Republike Srpske je 16.12.2015. godine je pokrenula drugi stečaj nad Fabrikom šećera, koji je i dalje u toku. U toku stečajnog postupka, sudija je povjeriocima priznao potraživanja, te je Fabrika šećera Bijeljina danas sa stečajnim upravnikom, skupštinom i odborom povjerilaca, ali drugih BEZ DUGOVANJA i sa aktivnim računom u poslovnoj banci, ali i dalje u postupku stečaja.

Kapaciteti fabrike su u solidnom stanju, sa očuvanom proizvodnom cijelinom, konzerviranim postrojenjima i proizvodnom cijelinom, sa raspoloživim ljudskim resursima – ključnim ekspertskim timom, ranijim rukovodiocima, te sa dovoljno radnika i raspoloživih poljoprivrednih površina u krugu od 100 kilometara oko same fabrike dovoljnih za pokretanje proizvodnje u kratkom roku.

Predinvesticiona studija „Fabrika šećera Bijeljina“ AD

1.1. Opšte karakteristike fabrike

Fabrika šećera – Bijeljina izgrađena je 1979. godine. Projektovani kapacitet prerade je 4.000 tona šećerne repe na dan. Planirana godišnja prerada u kampanji je 400.000 tona slatkog korjena. Fabrika je izvršila rekonstrukciju 1990. i 1991. god. i fabrika je proizvodila oko 55.000 tona šećera u kampanji, sto je maksimalni postignuti kapacitet.

Fabrika se prostire na cca 50 hektara, koji su u vlasništvu fabrike. Ekološka obrada korištene vode se obavlja u lagunama, taložnicima. Na površini od cca 30 hektara izgrađena je upravna zgrada, glavna proizvodna hala sa svim pratećim objektima i pripadajućim magacinima kao i deponijama za repro materijal i sirovinu.

Fabrika se snabdeva kompletnom svežom vodom iz sopstvenih bunara – 3 bunara sa po 300m³.

Na preostalih 20 ha izgrađene su lagune za prihvatanje svih otpadnih voda sa sistemom za prečišćavanje, tako da ispunjava ekološke kriterije.

Posjeduje svoju energiju od 96 MW koja ima

- dva kotla po 50 tona na ugalj iz lokalnog rudnika,
- dva kotla po 4,5 tona/ na mazut,
- turbinu i generator od 8 MW.

Fabrika iz elektro mreže koristi električnu energiju samo dok ne startuje sopstvenu proizvodnju, a nakon toga višak proizvedene električne energije, na bazi ugovora sa Elektrodistribucijom je u mogućnosti vraćati i prodavati u distributivnu mrežu.

Preradom šećerne repe projektovanim kapacitetom od 4.000 t/dan proizvede se:

- cca 550 do 560 tona/dan šećera,
- 250 t/dan briketiranog-suvog rezanca i
- 170 t/dan melase.

Za skladištenje proizvedenog šećera instalisani su kapaciteti od dva betonska silosa čiji je ukupni kapacitet 40.000 tona. Pakovanje šećera se vrši u pogonu opremljenom :

- dvije polu-automatske mašine za pakovanje šećera u ventil vreće od 50 kg, i
- automatskom mašinom tipa Heeser za pakovanje šećera po jedan i dva kilograma.

Takođe, posjeduje i liniju za proizvodnju šećera u kocki koji je tradicionalni proizvod u BiH. Kapacitet linije za proizvodnju šećera u kocki je 23 t/dan. Površina prihvatanog magacina šećera za cca 2.000 m² sa kapacitetom skladištenja od 8.000 t upakovanog proizvoda u magacinima.

Skladište melase ima kapacitet od 14.000 tona. Skladište za prihvatanje briketiranog rezanca je površine od 3000 m², sa kapacitetom prerade od 20.000 t upakovanog briketa. U svom krugu ima benzinsku pumpu i magacin za maziva i ostale hemikalije. Takođe, posjeduje i magacin rezervnih dijelova čija je korisna površina od cca 500 m².

Prihvatanje deponije i skladišta u fabrici su:

- za svježju repu kapaciteta od cca 15.000 tona,
- uglja20.000 tona,
- kamena krečnjaka..... 10.000 tona
- koksa2.000 tona
- skladište mazutacca 3.500 tona.

Predinvesticiona studija "Fabrika šećera Bijeljina" AD

Glavna upravna zgrada ima površinu od 400 m² kancelarijskog prostora, restoran od 500 m² i priručnu ambulantu od 40 m². Svi navedeni objekti se moraju renovirati.

Fabrika posjeduje i prateće objekte:

- mašinsku radionicu sa opremom za održavanje i izradu rezervnih dijelova za kompletno održavanje u sopstvenoj režiji mašinsko-tehnološke opreme,
- elektro radionicu i
- mehaničku radionicu za održavanje sopstvene građevinsko-poljoprivredne mehanizacije.

Sopstvena laboratorija fabrike u mogućnosti je da sa svojim radnicima vrši kontrolu svih ulaznih sirovina i hemikalija kao i sve faze proizvodnje u tehnološkom procesu te gotove proizvode.

Fabrika šećera osim prerade šećerne repe može da vrši i

- rafinaciju sirovog tršćanog šećera (uz manju rekonstrukciju za koju postoje projekti) u kapacitetu od cca 450 t/dan bijelog kristalnog šećera, van perioda kampanje.

Za svoju proizvodnju, fabrika do 1992. god. zapošljavala oko 450 radnika a u sezoni prerade šećerne repe još oko 500 sezonskih radnika.

Na bazi iskustava iz proizvodnje, u toku kampanje rada punim kapacitetom fabrika preradi: 400.000 t repe i proizvede:

- 55 do 56.000 tona šećera
- 17.000 tona melase
- 25.000 tona briketiranog rezanca a za to potroši:
 - 40.000 tona uglja,
 - 20.000 kamena krečnjaka,
 - 2.000 tona koksa,
 - 1,200.000 natron vreća od 50 kg,
 - 40 t maziva,
 - oko 10.000 mazuta.

U toku kampanje fabrika angažuje više od 200 autoprevoznika sa njihovim kamionima, koji su raspoloživi lokalno u periodu od 100 dana rada, koliko traje kampanja prerade šećerne repe.

Fabrika šećera u toku proizvodnje ima dodatne proizvode- melasu i rezanac, koji su lako utrživi na tržištu.

Prema statističkim podacima BiH godišnje potroši cca 150.000 tona šećera. Posebno se mora naglasiti da je proizvedeni šećer u fabrici šećera domaći proizvod koji je proizveden iz šećerne repe proizvedene na njivama Semberije i Posavine.

U BiH, poslije rata, podignuta je rafinerija za doradu sirovog tršćanog šećera u Brčkom.

Analizama potrebe tržišta u okruženju na oko 400-800 km od Bijeljine, nedostaje cca 1,5 milion tona šećera (Mađarska, Rumunija, Italija, Bugarska, Makedonija, Crna Gora, Slovenija.....).

Trenutno cijena šećera na evropskom tržištu se kreće između 450 i 550 evra po toni, što daje osnov svakom ozbiljnom investitoru za isplatu povjerilaca i preuzimanje fabrike te pokretanje proizvodnje.

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2. Prikaz sadašnje finansijske situacije „Fabrike šećera Bijeljina“

Pošto se Fabrika nalazi u postupku stečaja, potencijalni strateški partner/kupac može postati većinski vlasnik (67,98%) na način da isplati potraživanja stečajnih povjerilaca koja ukupno iznose 16.262 hiljade KM.

VLASNIČKA STRUKTURA (prije proglašenja stečaja)

	<i>Vlasnici</i>	<i>Iznos u KM</i>	<i>% vlasništva</i>
1.	Akcijski fond RS B. Luka	14.690.121,45	61,41
2.	Agrocoop exp.-imp. B. Luka	6.221.951,78	26,01
3.	Mali akcionari (1362)	947.286,78	3,96
4.	PREF a.d. B. Luka	808.542,75	3,38
5.	ZIF Kristal invest B. Luka	418.624,21	1,75
6.	Fond za restituciju	404.271,38	1,69
7.	ZIF Invest Nova B. Luka	392.310,69	1,64
8.	Zepter fond B. Luka	38.274,21	0,16
	Ukupno procjenjena vrijednost imovine	23.921.383,25	100,00

STRUKTURA vlasništva sa ukupnom iznosom priznatih potraživanja (po uvedenom stečaju)

	<i>Vlasnici</i>	<i>Iznos u KM</i>	<i>% vlasništva</i>
1.	Povjerioci (priznata potraživanja)	16.261.961,53	67,98
2.	Ostatak vlasničkog kapitala	7.659.421,72	32,02
	Ukupno	23.921.383,25	100,00

*Analitički prikaz sadašnje strukture priznatih potraživanja u strukturi vlasništva

	<i>Vlasnici</i>	<i>Iznos u KM</i>	<i>% vlasništva</i>
1.1	Razlučni povjerioci	1.457.336,36	6,09
1.2	Radnici-Opšti isplatni red	6.607.337,92	27,62
1.3	Ostali povjerioci-Opšti isplatni red	8.197.287,25	34,27
	Povjerioci (priznata potraživanja)	16.261.961,53	67,98
2.1	Akcijski fond RS B. Luka	4.703.650,88	19,66
2.2	Agrocoop exp.-imp. B. Luka	1.992.215,59	8,33
2.3	Mali akcionari (1362)	303.313,10	1,27
2.4	PREF a.d. B. Luka	258.888,45	1,08
2.5	ZIF Kristal invest B. Luka	134.039,88	0,56
2.6	Fond za restituciju	129.444,23	0,54
2.7	ZIF Invest Nova B. Luka	125.614,52	0,53
2.8	Zepter fond B. Luka	12.255,07	0,05
	Ostatak vlasničkog kapitala	7.659.421,72	32,02
	Ukupno procjenjena vrijednost imovine	23.921.383,25	100,00
**	Osporena potraživanja	15.458.401,00	-

** Ova potraživanja su u statusu sudskog spora jer nisu priznata od strane Stečajnog upravnika pa nisu ni izvjesne obaveze po tim sporovima, a najveći dio u iznosu od cca 12.572.000 KM se odnosi na sporno (neosnovano) potraživanje.

Struktura stalnih sredstava (stalne imovine) prema knjigovodstvenoj vrijednosti (u KM):

	Opis pozicije	31.12.'13.	31.12.'14.	31.12.'16.	31.12.'17.
1.	Nekretnine, postrojenja, oprema i invest. nekretnine				
1.1	Zemljište	1.749.542	1.749.542	1.749.542	1.749.541
1.2	Građevinski objekti	15.489.304	14.718.892	14.431.741	14.288.811
1.3	Postrojenja i oprema	9.412.758	8.581.544	7.341.925	6.548.937
1.4	Avansi i invest. nekretnine	0	0	111	111
	TOTAL	26.651.604	25.049.978	23.523.318	22.587.401

Više detalja se može naći u finansijskim izvještajima koji su prikazani na web stranici Banjalučke berze, budući da je Fabrika šećera kao akcionarsko društvo u obavezi da iste objavljuje na taj način, a i sve imovinske transakcije se odvijaju preko Berze (link:

<https://www.blberza.com/Pages/issuerannouncements.aspx?&code=FSBN-R-A>).

3. Procjena tržišne pozicije

3.1. Podaci o proizvodnji i potrošnji šećera u svijetu, Evropi i Bosni i Hercegovini

Prema izvještaju svjetske organizacije za hranu FAO, koja djeluje u okviru UN, najveći proizvođači šećera u svijetu i Evropi su:

*10 najvećih proizvođača šećera u svijetu

	ZEMLJA	Proizvodnja u milionima tona
1	Brazil	24,8
2	Indija	22,1
3	Kina	11,1
4	SAD	8,0
5	Tajland	7,3
6	Australija	5,4
7	Meksiko	4,9
8	Francuska	4,4
9	Nemačka	4,2
10	Pakistan	4

* Najveći

	ZEMLJA	Proizvodnja u milionima tona
1	Francuska	4,4
2	Nemačka	4,2
3	Poljska	2,0
4	Velika Britanija	1,2
5	Španija	1,2
6	Danska	0,9

proizvođači šećera u Evropi

Predinvesticiona studija "Fabrika šećera Bijeljina" AD

Ukupna proizvodnja šećera u svijetu iznosi oko 175 miliona tona, od čega je cca 80 % šećer proizveden iz šećerne trske, a 20 % iz šećerne repe.

Prosječna potrošnja šećera u svijetu iznosi 21,4 kg po glavi stanovnika. U razvijenim zemljama svaki stanovnik u prosjeku godišnje potroši 35 – 40 kg šećera, dok se u nerazvijenim zemljama potrošnja šećera svodi na 5-10 kg po glavi stanovnika. Danas u svijetu je sve veća potrošnja raznih zaslađivača, među kojim je šećer zastupljen sa 80 %.

Na osnovu detaljnih analiza stanja tržišta, FAO procjenjuje da će se do 2020. god. sa sadašnjih 175 miliona tona proizvodnja šećera povećati za 30 miliona tona. Ovakve procjene su zasnovane na osnovu trenda porasta broja stanovnika, rasta ekonomija i industrije mnogoljudnih zemalja. Na osnovu statističkih podataka u Evropi se proizvodi oko 10 % svjetske proizvodnje šećera.

Prema poznatim činjenicama vrlo je vjerovatno da će proizvođači iz EU povećavati proizvodnju i plasman na svjetsko tržište, jer Brazil je ograničen resursima te nema mogućnosti za povećanje proizvodnje, dok Indija, koja je drugi proizvođač u svijetu, ima prilično zastarjelu tehnologiju i oronule fabrike.

FAO prognozira da će u svijetu 2030. godine proizvodnja porasti na cca 257 miliona tona, a do 2050.g. na 300-350 miliona tona šećera.

U bližem okruženju proizvodnja šećera je sledeća:

3.2. Proizvodnja šećera u okruženju

	ZEMLJA	Proiz. u milionima tona	Napomena
1	Srbija	0,55	Rade fabrike: Pečinci, Kovačica, Vrbas, Senta, Žabalj, Crvenka Ugašene fabrike: Beograd, Kovin, Požarevac, Čuprija, Peć, Bač, Zrenjanin, Šabac, Nova Crnja, S. Mitrovica
2	Hrvatska	0,35	Rade fabrike: Virovitica, Osjek, Županja Ugašene fabrike: Beli Manastir
3	BiH	0,13	Rade fabrike: Brčko (uvozi sirovi šećer iz trske i vrši doradu-rafinaciju) Bijeljina je potencijalno u radnom stanju, ali ne radi i jedina je proizvođačka fabrika šećera u BiH
4	Slovenija	-	Ugašena fabrika: Ormož
5	Makedonija	-	Ugašena fabrika: Bitola
6	Crna Gora	-	Nema proizvodnju šećera

U BiH je, poslije rata, podignuta rafinerija za doradu sirovog tršćanog šećera u Brčkom i pokrenuta proizvodnja 2010. g. u Fabrici šećera Bijeljina.

Prema podacima institucija koje prate tržište šećera u svijetu i Evropi, u posljednje tri godine zabilježen je trend rasta cijene šećera tako da uz manje varijacije cijena šećera na svjetskim tržištima dostiže nivo od 330 dolara po toni, dok na evropskom tržištu drži nivo između 450 i 550 evra po toni.

Analizom tržišta, na teritoriji Bosne i Hercegovine, plasman gotovih proizvoda bi trebao biti zagarantovan u potpunosti, jer proizvodnja uz puni kapacitet fabrike (do 60.000 tona šećera) predstavlja cca 30 % ukupnih potreba Bosne i Hercegovine.

Prema statističkim podacima BiH godišnje potroši oko 160.000 tona šećera. Posebno se mora naglasiti da bi proizvedeni šećer u „Fabriki šećera Bijeljina“ bio domaći proizvod koji je proizveden iz šećerne repe proizvedene na njivama Semberije i Posavine.

Melasa se u potpunosti takođe može plasirati na tržištu BiH, a po konkurentnim cijenama (koje nadmašuju cijenu koštanja) u potpunosti se može izvesti u države u okruženju.

Silirani ili suvi odslađeni rezanac se u potpunosti može izvesti ili u cjelosti plasirati na domaće tržište.

3.3. Plasman gotovih proizvoda iz proizvodnje

Proizvodnja šećerne repe

Područje Semberije posjeduje više od 38.000 ha obradive zemlje koja je odgovarajuća za proizvodnju šećerne repe, što je osnovni uslov da se sa sigurnošću može očekivati samo u Semberiji sjetvu na površini od min. 4.000 ha.

Uz dobru organizaciju i dobar poslovni odnos sa proizvođačima repe te dobrim i kvalitetnim radom na terenu moguće je obaviti kvalitetno sjetvu na sledećim površinama:

1. 3.000-6.000 ha na području Semberije
2. 1.000-2.000 ha na području Posavine
3. 2.000 ha na području Mačve i Srema, što je dovoljno za planirani kapacitet fabrike.

Fabrika je dosada imala slijedeći asortiman gotovih proizvoda:

- šećer kristal bijeli pakovanja 1; 2 i 50 kg
- sušeni i briketirani rezanac pakovanja po 40 kg
- melasa (isporuka auto-cisternama)

Obzirom na činjenicu da je dosadašnji asortiman ponude osnovnog gotovog proizvoda bio vrlo skroman, to se u svrhu povećanja konkurentske sposobnosti na tržištu nameće potreba njegovog proširenja na sitna i ukrasna pakovanja:

- na maloprodajna pakovanja od 5-10 i 25 kg šećera,
- tzv. „džambo vreće“ od 1.000 kg,
- ugostiteljska pakovanja od 5-10 grama.

Napomenimo i da postoji tržišni prostor za plasman tečnih šećera, te bi u okviru rekonstrukcije trebalo predvidjeti i osposobljavanje linije za proizvodnju tečnih šećera.

Fabrika šećera u toku proizvodnje ima nus proizvode melasu i rezanac, koji su u svijetu veoma cijenjeni kao sirovina iz koji se proizvode cijenjeni proizvodi, koji na tržištu dostižu višestruku prodajnu cijenu u odnosu na cijenu koštanja.

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3.4. Korištenje nus proizvoda i rafinacija tršćanog šećera

Kao dodatna aktivnost fabrike u periodima između dve kampanje je mogućnost proizvodnje šećera iz sirovog tršćanog šećera. Za navedeno je potrebno investiranje. Obezbeđivanje potrebnih količina sirovog kao alternativne sirovine u dijelu proizvodnje ne predstavlja problem obzirom na količine raspoložive na tržištu (uvoz) i postojeće nabavne cijene.

Mogućnosti za povećanje prihoda fabrike bi bio u proizvodnji alkohola. Dodatnim investiranjem u opremu koja bi se postavila u postojeću halu za preradu melase u alkohol i stočni kvasac dobili bi se značajni prihodi.

Kalkulacija pokazuje da se iz 1 tone melase dobija 500-550 litara 96% alkohola koji je tržišno veoma interesantna proizvod. Sadašnja cijena alkohola na tržištu BiH je cca 2,50 KM/l.

Fabrika šećera kao dodatni, nus proizvod ima islađeni rezanac koji se oduvijek mogao prodavati koristeći kao stočna hrana. Predlažemo da se rezanac suši, ako je cijena energenta (npr. mazuta) prihvatljiva. Alternativno, ukoliko je cijena energenta nepovoljna, može se vršiti siliranje rezanaca u krugu fabrike. Silaža bi se plasirala kao stočna hrana na području Semberije. Fabrika ima mogućnost da proizvede veoma kvalitetnu silažu, sa veoma niskom cijenom proizvodnje.

Kao treći nus proizvod veoma je interesantan saturacioni mulj, koji bi se doradio, te bi se dobilo saturaciono đubrivo, koje je jako korisno za kalcifikaciju zemljišta na teritoriji Semberije i Posavine čija su zemljišta pretežno kisela. Saturaciono đubrivo izuzetno je korisno dodavati na oranice, voćnjake, bašte. Saturaciono đubrivo povećava prinose na kiselim zemljištima i do 40 %, zavisno od kulture koja se gaji.

Fabrika je u mogućnosti proizvesti do 30.000 tona saturacionog đubriva. Napominjemo da saturaciono đubrivo povećava biološko-fizičke osobine zemljišta. Takođe, ubrzava sušenje zemljišta posle velikih padavina, a kontrolisano zadržava vlagu u sušnom periodu.

Prihod od saturacionog đubriva bi se mogao ostvariti do 4.000.000 KM. Na području Semberije na više od 70 % zemljišta godišnje bi trebalo po ha baciti 3-4 tone. Iz navedenoga se može zaključiti da u narednih 10 godina bi plasman bio zagarantovan.

Posebno bi se saturaciono đubrivo moglo koristiti kao dodatni stimulans proizvođačima šećerne repe, što bi se prilikom ugovaranja detaljno definisali uslovi preuzimanja.

Uvođenje novih proizvoda i proširenje asortimana dosadašnje proizvodnje, fabrika bi radila cca 300 dana preradu (u jednom vidu produžene kampanje), angažovana radna snaga bi bila ravnomjernije iskorištena tokom cijele godine, a fabrika bi po tom osnovu ostvarivala dodatni bruto prihod na godišnjem nivou od oko 30.000.000 KM (prema okvirnim proračunima).

Opšti zaključak je da za kompletnu proizvodnju fabrike postoji dovoljno tržišnog prostora, tj. plasman je u potpunosti obezbjeđen na tržištu BiH i Evrope.

4. Tehničko-tehnološko stanje i potrebna ulaganja po fazama i proizvodnim linijama

4.1. Kapitalni remont , rekonstrukcije, sanacije objekata i nabavke

Ova Pred-investiciona studija obuhvata listu neophodnih radovi na

- proizvodnoj opremi, radovi
- na sanaciji cijevne mreže,
- građevinski radovi na objektima,
- modernizacija proizvodnje,
- sanacija restorana,
- nabavka nove i polovne opreme u proizvodnji,
- nabavka nove opreme za laboratoriju,
- nabavka polovne mehanizacije za potrebe opsluživanja proizvodnje,
- djelimična antikorozivna zaštita,
- nabavka kancelarijskog namještaja i birotehničke opreme.

Remont mogu obavljati radnici Proizvodno-tehničkog sektora, koji su ranije bili zaposleni u fabrici, uz angažovanje trećih lica na specifičnim poslovima Elektroenergetike, Mjernoregulacione tehnike, Automatike, Termoenergetike i građevinskim radovima (sanacija krovova, fasada, cevarenju i dr.).

Za proizvodnju koja se ostvarila u kampanji 2010 godine izvršene su aktivnosti na interventnoj sanaciji na proizvodnim kapacitetima sa ciljem pokretanja proizvodnje. Tokom tih aktivnosti koje su realizovane u fabrici sagledano je:

- stanje tehnološkog procesa
- stanje elektro-energetskih postojenja
- stanje ispravnosti merno-regulacione tehnike (koja se mora inovirati)
- stanje automatike (koja se mora inovirati i/ili u potpunosti zameniti)
- stanje termoenergetike
- građevinsko stanje objekata fabrike neophodno za kapitalni remont, koji je projektovan i sastavni deo Studije.

Na bazi realizovane proizvodnje, kapitalni remont se mora obaviti na sledećim tehnološkim cjelinama:

1. Linija prijema i skladištenja šećerne repe
2. Linija pranja i transporta repe
3. Linija rezanja i proizvodnje sirovog soka
4. Linija sušenja i briketiranja rezanaca
5. Linija čišćenja i proizvodnja rijetkog soka
6. Linija proizvodnje gustog soka
7. Rafinerija
8. Proizvodnja kreča, Ca(OH)_2 i CO_2 -gasa
9. Energana i hemijska priprema vode
10. Linija vodosnabdjevanja i sistema za prečišćavanje otpadnih voda
11. Prijemna i procesna laboratorija
12. Elektro-energetika i Mjerno-regulaciona tehnika
13. Linija skladištenja, pakovanja šećera
14. Radna jedinica transporta i mehanizacije
15. Restoran za ishranu radnika

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4.2. Rekonstrukcija, nabavka nove i polovne opreme, građevinska sanacija

Planom je predviđena zamjena devastirane i nefunkcionalne opreme u proizvodnji nabavkom nove ili adekvatno polovne koja će u potpunosti tehnički biti u funkciji.

Za pokretanje proizvodnje mora se obnoviti sledeća oprema i to:

1. Nabavka 6 novih centrifugalnih pumpi za transport sirovog i rijetkog soka.
2. Nabavka dvije nove automatske prese umjesto vakum filtera.
3. Nabavka jednog novog DDS filter-ugušćivača na l-filtraciji
4. Nabavka 6 zupčastih pumpi na rafineriji
5. Nabavka jedne nove ili polovne elektronapojne pumpe za energiju
6. Rekonstrukcija na liniji vakuma
7. Rekonstrukcija MRT i Automatike (Projekat urađen 2011. godine)
8. Rekonstrukcija - prilagođavanje za preradu tršćanog šećera (projekat urađen 1997. god.)
9. Rekonstrukcija PP mreže,
10. Nabavka nove laboratorijske opreme
11. Nabavka nove i polovne poljoprivredne i građevinske mehanizacije, kao i voznog parka
12. Nabavka opreme za restoran kapaciteta 400 obroka
13. Nabavka kancelarijskog namještaja
14. Nabavka birotehničke opreme
15. Sanacija krovova - fasada na objektima
16. Sanacija cjevne podzemne mreže

Kroz taj proces pripreme i probne proizvodnje u fabrici su sačinjeni su zapisnici i evidentirane potrebe po svim segmentima proizvodnog procesa, te sačinjeni okvirni predmeri i predračuni za kapitalni remont čije kompletne podatke dajemo u nastavku teksta.

4.3. Projektovana investiciona ulaganja

Sredstva za kapitalni remont, rekonstrukcije, modernizaciju, građevinske radove, nabavku opreme procenjuju se u ovoj Studiji na sledeći način:

REKAPITULACIJA TROŠKOVA

1. LINIJA PRIJEMA, SKLADIŠTENJA, TRANSPORTA I PRANJA REPE	86.900 KM
2. REZANJE, EKSTRAKCIJA, SUŠENJE I BRIKETIRANJE REZANACA	158.900 KM
3. LINIJA ZA PROIZVODNJU KREČA I CO ₂ GASA	98.800 KM
4. LINIJA ČIŠĆENJA I FILTRACIJE	2.351.600 KM
5. LINIJA OTPARAVANJE I PROIZVODNJU GUSTOG SOKA	67.000 KM
6. RAFINERIJA	142.000 KM
7. LINIJA SUŠENJA, SKLADIŠTENJA I PAKOVANJA ŠEĆERA	85.900 KM
8. VODOSNABDEVANJE I SISTEM ZA PREČIŠĆAVANJE OTPADNIH VODA	1.286.000 KM
9. LINIJA SUŠENJA I BRIKETIRANJA REZANACA	5.000 KM
10. PRIJEMNA I PROCESNA LABORATORIJA	350.000 KM
11. ENERGIJA	1.500.000 KM
12. REMONT EL-ENERGETIKE, MERNOREGULACIONE TEHNIKE I AUTOMATIKE	6.000.000 KM
13. REKONSTRUKCIJA FABRIKE ZA PRERADU SIROVOG TRŠĆANOG ŠEĆERA	400.000 KM
14. NABAVKA ALATA ZA TEHNIČKI SEKTOR	80.000 KM
15. ANTIKOROZIJA ZAŠTITA	700.000 KM
16. UREĐENJE KRUGA I SANACIJA OGRADE OKO FABRIKE	60.000 KM

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17. SANACIJA FASADA I KROVOVA OBJEKATA	800.000 KM
18. NABAVKA MEHANIZACIJE	850.000 KM
19. SANACIJA RESTORANA	80.000 KM
20. SANACIJA UPRAVNE ZGRADE- KANCELARIJE.....	60.000 KM

UKUPNO KM :

15,162.100 KM

4.4 Dinamički plan procijenjenih potrebnih ulaganja sredstava za kapitalni remont

Datum	IZNOS u KM	PLANIRANI RADOVI
Faza I T+ 7 dana	2,000.000	- Izrada detaljnih planova, projekata, tendera - Sanacija restorana i nabavka opreme - Nabavka alata
Faza II T+ 15 dana	1,000.000	- Nabavka mehanizacije - Nabavka potrošnog materijala - Nabavka kancelarijskog namještaja
Faza III T+ 30 dana	3,000.000	- Početak remonta mašinsko-tehnoške opreme - Uvođenje trećih firmi na remontu - Otvaranje gradilišta - Nabavka el. kablova i ugradnja - Početak - Početak remonta na energetici i MRT - Nabavka rezervnih djelova po prioritetu - Početak sanacije krovova i fasada - Početak radova na sanaciji cjevne mreže - Betonska sanacija bazena i zaštita - Početak radova na AKZ - Početak čišćenja taložnih polja - Isplata avansa, faktura i situacija za izvršene nabavke i radove
Faza IV T+ 45 dana	4,000.000	- Narudžbe opreme čiji je rok isporuke dug, a po usvojenom planu nabavke - Isplata izvedenih situacija
Faza V T+ 60 dana	4,000.000	- Nastavak finansiranja kapitalnog remonta ...
Faza VI T+ 7 mjes.	1,162.100	- Konačna isplata kapitalnog remonta ...

***NAPOMENA:**

- Da bi se kvalitetno uradio kapitalni remont prema navedenom planu , kupac/investitor mora obezbjediti 15,162.100 KM, a prema predloženom termin planu .
- Da bi se fabrika kvalitetno pripremila za preradu šećerne repe u 2019. potrebno je uraditi sledeće:
 - Da investitor formira odmah po preuzimanju fabrike rukovodnu strukturu u fabrici.
 - Primiti prvu grupu radnika najkasnije do 15.08.2018.god. , čiji bi zadatak bio da se sa investitorom obezbjede uslovi za otvaranje gradilišta (izrada planova i tehničke dokumentacije, osposobljavanje priručnih radionica, obezbjeđenje HTZ –opreme, obezbjeđenje ručnog i specijalnog alata, nabavka mehanizacije, formiranje

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- radničkog restorana, uređenje kruga fabrike, formiranje obezbjeđenja fabrike, izraditi normativna akta za neophodno pravno-ekonomsko poslovanje i sl.)
- Da se najkasnije do 25.08.2018.god. usvoje planovi za remont i termin planovi prijema radne snage, kao i termin plan uvođenja posebnih specijalizovanih firmi na poslovima remonta.

****NAPOMENA:**

Elektronska verzija svih podataka potrebnih za Kapitalni remont fabrike je raspoloživa potencijalnim kupcima.

5. Ljudski resursi

5.1 Menadžment Fabrike šećera Bijeljina a.d.

Ključni dugogodišnji rukovodioci fabrike šećera su i danas raspoloživi za angažovanje i saradnju te za pokretanje proizvodnje u fabrici. U tom timu danas su na raspolaganju sledeći bivši rukovodioci i to:

1. Rakić Rade, dipl.ing.teh. – tehnički i komercijalni menadžer
2. Fafulić Mirko, dipl.ing.teh. – tehnički i komercijalni menadžer
3. Rakić Slobodan, dipl.el.ing.- procesni menadžer, Zrenjanin
4. Nikolić Vojislav, dipl.el.ing - vlasnik firme Energo Sistem, Brčko - elektro sektor
5. Faik Muhić, dipl.pravnik – vlasnik pravničke firme Muhić, Tuzla – pravna služba

Navdeni tim eksperata je sačinio ovu Predinvesticionu studiju i za sve gore navedene rukovodioce biografije su raspoložive za potencijalnog kupca.

5.2 Radna snaga

Kada je fabrika bila u pogonu i proizvodnji, prije rata zapošljavala 450 stalnih radnika i oko 500 sezonskih radnika.

U slučaju planirane modernizacije djelova fabrike projektovano je da u fabrici bude zaposleno 200 stalnih i 200 sezonskih radnika.

Za novo primljene radnike treba predvideti program obuke za rad i korištenje instalirane opreme, a za to se mogu angažovati gore navedeni menadžerski tim.

6. Sirovinska baza

6.1. Proizvodnju šećerne repe na području Semberije - istorija

Fabrika šećera je radila od 1979 godine a prestala da radi 1993. god. radi ratnih dešavanja u Bosni i Hercegovini.

Ponovnim pokretanjem fabrike 2010. godine rukovodstvo fabrike, PD „Semberija“, PZ „Agrosemerija“, jedan broj zadruga i individualni proizvođači počeli su raditi na oživljavanju proizvodnje šećerne repe na ovim područjima. Obzirom da je ponovo fabrika zaustavljena prestale su aktivnosti na omasovljenju proizvodnje.

Semberija koja se prostire između dvije velike rijeke Sava i Drina je idealna oblast za proizvodnju šećerne repe, obzirom da voda učestvuje 75 % u prinosu. Voda za potrebe navodnjavanja obradivih površina nalazi se u dovoljnoj količini već na dubini oko 5 m.

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Semberija posjeduje 38.000 ha zemljišta koje je pogodno za proizvodnju šećerne repe, što omogućuje proizvodnju za rad fabrike projektovanog kapaciteta uz poštovanje četverogodišnjeg plodoreda.

Semberiju zahvata umjerena kontinentalna klima. Najviše padavina je u maju i junu, a najmanje u martu i septembru. Snijeg se zadržava do 40 dana (decembar-mart). Zime su blage sa prosečnom temp. od -2 °C. Relativna vlažnost iznosi 70-80%. Broj sunčanih dana kreće se od 75-100 dana . Temperatura u junu,julu, avgustu i septembru kreće se od 15-37°C. Srednja godišnja temperatura je 10°C.

Semberska zemlja je dobrog kvaliteta, pretežno je rasprostranjena plodna crnica, černoziem, ritska crnica i rječni nanosi . Veće obradive površine su povoljne za uzgoj šećerne repe.

Na području semberije i posavine sjetva se obavlja u periodu od 25. 03. do 20. 04. na pripremljenim parcelama. Priprema parcele za sjetvu podrazumjeva oranje strnjika, duboko oranje, tanjiranje i rasturanje đubriva NPK 8-16-24 u količini od 200 kg/Ha. Pred sjetvu vrši se đubrenje sa NPK 15-15-15 u količini od 400 kg/ha i KAN, AN u količini od 200 kg/ha. Proizvođači korišćenog đubriva su: Pančevo, Subotica (Srbija) i Kutina (Hrvatska).

Ako se pravilno izvrši jesenja priprema i grubo ravnanje parcele, predstetvena obrada zemljišta i kvalitetna zaštita (od cercospore, buvača, pipe, lisna vaš) prinos mora biti dobar. Uz kvalitetnu pripremu prinos u semberiji iznosio je oko 45 do 55 T/Ha.

Zaštitna sredstva (insektidi, herbiciti) korišteni su iz programa BASF – Njemačka.

U praksi se navedena đubriva se daju kao avans. U toku sjetve avansno se daje i sredstvo za prskanje protiv korova. Besplatno su davana sredstva za ostala prskanja, jer domaći proizvođači nemaju dovoljne kreditne sposobnosti, a na ovaj način se ostvaruje bolja saradnja.

Većinom se koristilo KWS sjeme nove generacije. Planskom proizvodnjom pre 1993. godine vršeno je sejanje sa planskim plodoredom svake četvrte godine na istoj parceli. Potrebna količina sjemena je oko 1,2 SJ/ha. Sejanje se obavlja putem pneumatskih sijačica.

6.2. Opsluživanje uzgoja šećerne repe

Pošto na teritoriji Republike Srpske domaćinstva raspolažu sa manjim parcelama (prosjek 2 ha) broj uzgajivača pre rata kretao se od 3000 do 4500 sa prosječnom površinom od 0,8 ha. Danas dobar dio individualnih proizvođača posjeduju parcele i preko 10 ha.

Ugovaranje repe vršila je fabrika direktno sa proizvođačima , veoma malo preko zadruga.

Kompletnu proizvodnju šećerne repe avansno je pokrivala fabrika uz besplatno davanje sredstava za prskanje protiv cercospore, buvača i pipe. U cilju unapredjenja proizvodnje proizvođačima šećerne repe fabrika je ustupala besplatno oko 15 % sirovog rezanca na predanu repu.

Fabrika šećera je oslonjena samo na drumski transport, što znatno poskupljuje proizvodnju. Potrebno je nastaviti aktivnosti oko obezbjeđenja željezničkog transporta do fabrike.

Što se tiče mehanizacije za proizvodnju šećerne repe (sijačice, kombajni za vađenje i dr. polj. mehanizacija) fabrika nema. Veći dio je u ratu otuđen ili devastiran. Potrebna je nabavka nove mehanizacije.

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Da bi se obezbjedio dobar prinos, a to će se sigurno riješiti navodnjavanjem, potrebno je nabaviti sisteme za navodnjavanje. Trenutno u Semberiji je mali broj domaćinstava koji posjeduje opremu za navodnjavanje.

Trenutno, na području Republike Srpske cijene drugih poljoprivrednih kultura su bilansno ne povoljnije za proizvodnju u odnosu na šećernu repu. Danas samo proizvodnja povrća ima prednost u odnosu na repu. Prednost u proizvodnji repe u odnosu na povrće je siguran otkup kompletne proizvodnje i garancija poštovanja ugovorene cijene.

6.3. Kontrola kvaliteta uzgoja šećerne repe

Utvrđivanje kvaliteta šećerne repe vrši se u fabričkoj laboratoriji. Kvalitet šećerne repe (sadržaj šećera i % nečistoća) određuje se u sirovinskoj laboratoriji uzimajući najmanje jedan uzorak iz svakog vozila.

MIŠLJENJE:

Budući investitor/vlasnik ima dobru perspektivu da na području Semberije i Posavine obezbjedi dovoljne količine repe za pun kapacitet fabrike.

Takođe, obzirom da su fabrike šećera u Šapcu i Sremskoj Mitrovici ugašene, to daje šansu Bijeljinskoj šećerani da taj prostor pokrije za proizvodnju i otkup repe sa navedenog područja. Posebno je interesantno područje Mačve, jer je udaljenost od Fabrike šećera do njiva 60 km.

6.4. Plan proizvodnje šećerne repe za kampanju 2019.

Za kampanju u 2019. godini može se planirati proizvodnja od cca. 300.000 tona šećerne repe na području Semberije i Posavine, Srema i Mačve.

Područje Semberije posjeduje više od 38.000 ha obradive zemlje koja je odgovarajuća za proizvodnju šećerne repe, što je osnovni uslov da sa sigurnošću može očekivati da samo u Semberiji 2019.god. sjetvu na površini od min. 4.000 ha.

Uz dobru organizaciju, dobar poslovni odnos sa proizvođačima repe, dobrim i kvalitetnim radom na terenu moguće je obaviti kvalitetno sjetvu na sledećim površinama:

	u 2019.god.	u 2020.god.
	Ha	Ha
Semberija	3000	4000 - 6000
Posavina	1000	1500 - 2000
Srem-Mačva	2000	2000

Da bi se sa sigurnošću, kod proizvođača, stvorili zainteresovanost za sijanje ove industrijske kulture na području Semberije i Posavine, strateški partner/vlasnika fabrike mora se posebno angažovati na terenu, a potrebna je i podrška Vlade Republike Srpske.

- Uz dobru organizaciju, te disciplinovani rad na terenu i kvalitetan podsticaj mišljenje je da je moguće ostvariti sjetvu na cca 6000 Ha, što bi omogućilo jednu kvalitetnu proizvodnju u 2019.god.

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- Da bi ostvarili planirane količine repe potrebno je obezbjediti do kraja septembra 2018. Ugovore u kojima će biti jasno definisane obaveze fabrike šećera i proizvođača šećerne repe.
 - Zbog značaja proizvodnja šećerne repe i rada fabrike, predlažemo da šećerna repa treba biti tretirana od strane Vlade kao strateški proizvod, jer je to značajan kapacitet koji može doprineti povećanju bruto društvenog proizvoda Republike Srpske.
 - U skladu sa kalendarom za proizvodnju šećerne repe blagovremeno obezbjedi sav repro materijal, kompletan stručni nadzor od pripreme zemljišta, sjetve do vađenja i predaje u fabriku. Takođe je važno radi stvaranja povjerenja između poljoprivrednika i fabrike, da se poštuje ugovoreno vrijeme isplate za isporučenu šećernu repu.
 - Preporuka:
 - Da se traži od Vlade Republike Srpske, odnosno Ministarstva za poljoprivredu da uvrstiti u plan posticaja za proizvodnju šećerne repe, u cilju stimulisanja poljoprivrednih proizvođača za sjetvu 2019. godine. Smatra se da posticaj mora biti vezan za kg predate repe, a ne po površini zasejanom navedenom kulturom.
- Naš predlog: Posticaj da bude 0,02 KM/kg predane čiste repe fabrici šećera u Bijeljini.

6.5. Planiranje otkupne cijene šećerne repe

Za proizvodnju šećerne repe u 2019. godini, ovom predinvesticionom studijom kalkulacije su sačinjene prema sledećim uslovima:

1. Otkupna cijena šećerne repe iznosila bi 70 KM/t čiste repe, a na bazi digestije od 16 %.
2. Za veću ili manju digestiju cijena se preračunava na bazi sledeće tabele:

Digestija %	do 12,99	13,00	13,50	14,00	14,50	15,00	15,50	16,00	16,50	17,00	17,50	18,00
Cijena KM/t	54,69	56,88	58,80	61,25	63,43	65,62	67,81	70,00	72,19	74,38	76,56	78,75

3. Avansno obezbjediti sjeme šećerne repe (1,2 SJ/ha)
4. Avansno obezbjediti sredstvo za zaštitu od cercospore
5. Avansno obezbjediti sredstvo za zaštitu od repine pipe
6. Stimulacija u obliku đubriva/sirovog rezanaca od 10 % na predanu količinu čiste repu
7. Avansno obezbjediti osnovno mineralno đubrivo NPK 15:15:15 u količini od 600 kg/ha
8. Avansno obezbjediti mineralno đubrivo KAN u količini od 400 kg/ha
9. Treba tražiti od Vlade RS da se odobri subvencija proizvođačima na dizel od 40 l /ha
10. Treba tražiti od Vlade RS podsticaj proizvođačima šećerne repe u cilju podrške fabrici.

Predlaže se da se konačni obračun uradi u roku od 5 dana po predaji šećerne repe, a u skladu sa Ugovorom. Plaćanje po obračunu obaviti najkasnije u roku od 30 dana.

Da bi uspeo plan proizvodnje potrebno je hitno pristupiti izradi plana za nabavku potrebnih repro-materijala, te početi sve aktivnosti na terenu. Neophodno je odmah, po potpisu Ugovora sa proizvođačem, isporučiti sav repro-materijal (sjeme, đubrivo, zaštitu).

NAPOMENA:

- ## 7. Rekapitulacije ukupnih ulaganja za pokretanje proizvodnje

[illegible]

8. Plan prihoda od prodaje osnovnog proizvoda šećera i ostalih proizvoda

8.1 Plan proizvodnje

1. Šećer iz repe	(13 %)	39.000 t
2. Melasa	(4,5 %)	13.500 t
3. Suvog rezanac	(6,3 %)	18.900 t

8.2. Vrijednost proizvodnje

Vrijednost proizvodnje (realizacija)		2019.	2020.	2021.	2022.	(cijene)	
1.	Šećer iz repe	35.100.000	46.051.200	49.982.400	49.982.400	900	KM/t
2.	Šećer iz trske	-	-	-	-	-	KM/t
3.	Melasa	4.050.000	5.313.600	5.767.200	5.767.200	300	KM/t
4.	Šuvi rezanac	6.615.000	8.678.880	9.419.760	9.419.760	350	KM/t
TOTAL		45.765.000	60.043.680	65.169.360	65.169.360		

Napomena: * Cijene su formirane na bazi trenutno važećih na tržištu BiH.

9. Dinamičke projekcije proizvodnje šećerne repe i obezbjeđenja osnovnih sirovina i repromaterijala

Plan proizvodnje šećerne repe	20 19		20 20		20 21		20 22		...
	ha	t	ha	t	ha	t	ha	t	
Semberija	3.250	155.000	5.000	240.000	5.750	273.600	5.750	273.600	
Posavina	1.000	48.000	1.200	57.600	1.200	57.600	1.200	57.600	
Srem-Mačva	2.000	96.000	2.000	96.000	2.000	96.000	2.000	96.000	
Total	6.250	300.000	8.200	393.600	8.900	427.200	8.900	427.200	
*prinos u t/ha		48		48		48		48	

Plan obezbjeđenja sirovina										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
*Ugovorena proizvodnja u Semberiji i Posavini	t 204 000	297.600	331.200	331.200	331.200	331.200	331.200	331.200	331.200	331.200
*Nabavka iz drugih regiona	t 96 000	96.000	96.000	96.000	96.000	96.000	96.000	96.000	96.000	96.000
*Siromi tršćani šećer	t -	-	-	-	-	-	-	-	-	-
Total	300.000	393.600	427.200	427.200	427.200	427.200	427.200	427.200	427.200	427.200

10. Dinamička projekcija proizvodnje šećerado postizanja punog kapaciteta

Plan proizvodnje šećera

		2019.	2020.	2021.	2022.	...
Šećer iz repe	t	39.000	51.168	55.536	55.536	
Melasa	t	13.500	17.712	19.224	19.224	
Suvi rezanac	t	18.900	24.797	26.914	26.914	

11. Proračun operativnih troškova i drugih poslovnih rashoda

11.1. Materijalni troškovi sirovina i repromaterijala, radne snage i drugi poslovni rashodi

-Projekcija utroška sredstava je bazirana na planskim normativima za preradu 300.000 tona šećerne repe, te sadašnjim cijenama.

Plan operativnih troškova					normativ	
	2019.	2020.	2021.	2022.	...	(cijene) po 1t repe
1 Šećerna repa	21.000.000	27.552.000	29.904.000	29.904.000		70
2 Ugalj	3.750.000	4.920.000	5.340.000	5.340.000		125 0,100
3 Kamen	198.000	259.776	281.952	281.952		12 0,0550
4 Koks	792.000	1.039.104	1.127.808	1.127.808		600 0,0044
5 Mazut ** (kad se rezanac suši)	5.953.500	7.810.992	8.477.784	8.477.784		900 0,02205
6 Drva za potpalu kr. peći i kotlova	960	1.260	1.367	1.367		60 0,000053
7 Ulja i maziva	48.000	62.976	68.352	68.352		4.000 0,000040
8 Hemikalije za proizvodnju	60.000	78.720	85.440	85.440		600 0,00033
9 Hemikalije za laboratoriju	10.000	13.120	14.240	14.240		10.000
10 Dizel gorivo za unutrašnji transport	82.000	107.584	116.768	116.768		2.050 0,000133
11 Benzin -95	16.400	21.517	23.354	23.354		2.050 0,000027
12 Vreće za šećer	256.000	335.872	364.544	364.544		0,32 2,667
13 Vreće za rezanac	160.000	209.920	227.840	227.840		0,32 1,667
14 Filter platna	36.000	47.232	51.264	51.264		12.000 0,00001
15 HTZ -oprema (cca 400 radnika)	28.000	28.000	28.000	28.000		70
16 Topli obrok	289.000	289.000	289.000	289.000		
17 LD u kamp. za sezonske radnike(bruto)	537.900	537.900	537.900	537.900		
18 LD za stalne radnike (bruto)	3.585.600	3.585.600	3.585.600	3.585.600		
19 Potrošni kancelarijski materijal	10.000	10.000	10.000	10.000		
20 Potrošni materijal za higijenu	5.000	5.000	5.000	5.000		
21 Prevoz radnika u kampanji	31.680	31.680	31.680	31.680		
22 Prevoz radnika van kampanje	38.400	38.400	38.400	38.400		
23 Transp. usluge, osiguranje, špedicija, carina, takse, registracije	800.000	1.049.600	1.139.200	1.139.200		1 2,667
24 El. Energija	500.000	500.000	500.000	500.000		
25 Dnevnice, terenski dodatak	100.000	100.000	100.000	100.000		
26 Tršćani šećer sirovi	-	-	-	-		600 1,11
27 Ostale obaveze po zaposlenom u kampanji	500.000	500.000	500.000	500.000		
28 Regres (za 200 radnika)	40.000	40.000	40.000	40.000		
UKUPNO	38.828.440	49.175.252	52.889.493	52.889.493		

11.2. Obračun amortizacije

Amortizacija

Stalna imovina	2018	2019.	2020.	2021.	2022.	2028.
1 Nabavna vrij. imovine	29.463.889	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225
2 Ulaganje	20.060.336	0	0	0	0	-
3 (1+2)	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225
4 Godišnja amortizacija	933.973	1.610.007	1.610.007	1.610.007	1.610.007	1.610.007
5 Neto vrij. stalne imovine	21.653.316	40.103.645	38.493.638	36.883.632	35.273.625	25.613.584

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12. Finansijski efekti ulaganja-dinamička projekcija

BILANS USPJEHA				
	2019.	2020.	2021.	2022. ...
1 Poslovni prihodi-realizacija	45.765.000	60.043.680	65.169.360	65.169.360
2 Ostali prihodi	45.000	45.000	45.000	45.000
3 Ukupan prihod (1+2)	45.810.000	60.088.680	65.214.360	65.214.360
4 Osn. sirovina	21.000.000	27.552.000	29.904.000	29.904.000
5 Energenti	11.094.860	14.400.456	15.587.081	15.587.081
6 Repro-materijali	367.000	476.824	516.248	516.248
7 Ambalaža	416.000	545.792	592.384	592.384
8 Materijalni troškovi (4+5+6+7)	32.877.860	42.975.072	46.599.713	46.599.713
9 Troškovi zarada i ost.ličnih rashoda	5.150.580	5.150.580	5.150.580	5.150.580
10 Zavisni nabave i usluge	800.000	1.049.600	1.139.200	1.139.200
11 Amortizacija	1.610.007	1.610.007	1.610.007	1.610.007
12 Nematerijalni troškovi i ost.rashodi	350.000	350.000	350.000	350.000
13 Fin. rashodi po kreditima	1.203.620	2.949.315	2.949.315	2.949.315
14 Ukupni rashodi (8+9+10+11+12+13)	41.992.067	54.084.575	57.798.815	57.798.815
15 BRUTO dobit (3-14)	3.817.933	6.004.105	7.415.545	7.415.545
16 Porez na dobit 10%	381.793	600.411	741.555	741.555
17 NETO DOBIT (15-16)	3.436.140	5.403.695	6.673.991	6.673.991

13. Dinamička tržišno-finansijska ocjena ulaganja

Da bi se izradila korektna i realna dinamička finansijska ocjena ovako projektovanog ulaganja (posmatranog kao investicija) uvedena je hipotetska pretpostavka da će se predmetno ulaganje finansirati dugoročnim komercijalnim kreditom (što je inače praksa kod ovakvih investicija), po uslovima koji su prikazani:

Kredit		Iznos u KM
iznos:	20.060.336	god.k-ta u grejsu 1.203.620
grace period:	1 godina	
rok otplate:	10 godina	godišnji anuitet 2.949.315 KM
kamatna stopa god.:	6%	

Na definisanje vremenskog horizonta posmatranja investicije presudan uticaj ima činjenica da gro ulaganja čine ulaganja u opremu, njen pretpostavljeni vijek trajanja, odnosno moralnog i funkcionalnog rabaćenja. U skladu sa navedenim je rok otplate potencijalnog kredita za finansiranje ovakve investicije, te sve zajedno definiše ekonomski vijek projekta (investicije ili ulaganja) te su sve dinamičke projekcije urađene prema njemu.

Vremenski horizont (ekonomski vijek Projekta): 10 godina

Finansijski tok (u 000 KM)									
	2019.	2020.	2021.	2022.	2023.	2025.	2026.	2027.	2028.
1 Ukupan prihod	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	65.214
2 Izvori finansiranja	20.060	0	0	0	0	0	0	0	0
3 Ostatak vrijednosti projekta	-	-	-	-	-	-	-	-	25.614
4 PRIMICI	65.870	60.089	65.214	65.214	65.214	65.214	65.214	65.214	90.828
5 Ulaganja	20.060	0	0	0	-	-	-	-	-
6 Materijalni troškovi	32.878	42.975	46.600	46.600	46.600	46.600	46.600	46.600	46.600
7 Troškovi zarada i ostalih rashoda	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151
8 Ostali rashodi	1.150	1.400	1.489	1.489	1.489	1.489	1.489	1.489	1.489
9 Fin. rashodi po kreditima	1.204	2.549	2.949	2.949	2.949	2.549	2.949	2.949	2.949
10 Obaveze za porez na dobit	382	1.190	1.331	1.331	742	742	742	742	742
11 IZDACI	60.824	47.666	51.622	51.622	56.930	56.930	56.930	56.930	56.930
12 NETO PRIMICI (4-11)	5.046	12.322	13.593	13.593	8.284	8.284	8.284	8.284	33.898

Finansijska ocjena investicije prevashodno podrazumijeva procjenu likvidnosti. Likvidnost ovako koncipiranog projekta jeste njegova sposobnost da u svakom razdoblju svog vijeka podmiruje sve dospjele finansijske obaveze. Neto primici u finansijskom toku predstavljaju povećanje finansijskog potencijala (uz uslov da su pozitivne veličine).

Likvidnost ovog projekta se procjenjuje kao veoma povoljna, budući da su neto primici u svim godinama vijeka projekta pozitivni ili drugim riječima rečeno finansijska ocjena ovako koncipiranog projekta je "izrazito likvidan projekat".

Ekonomski tok (u 000 KM)									
	2019.	2020.	2021.	2022.	2023.	2025.	2026.	2027.	2028.
1 Ukupan prihod	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	65.214
2 Ostatak vrijednosti projekta	-	-	-	-	-	-	-	-	25.614
3 PRIMICI	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	90.828
4 Ulaganja	20.060	-	-	-	-	-	-	-	-
5 Materijalni troškovi	32.878	42.975	46.600	46.600	46.600	46.600	46.600	46.600	46.600
6 Troškovi zarada i ostalih rashoda	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151
7 Ostali rashodi	1.150	1.400	1.489	1.489	1.489	1.489	1.489	1.489	1.489
8 Obaveze za porez na dobit	382	1.190	1.331	1.331	742	742	742	742	742
9 IZDACI	59.621	50.716	54.571	54.571	53.981	53.981	53.981	53.981	53.981
10 NETO PRIMICI (3-9)	-13.811	9.373	10.643	10.643	11.233	11.233	11.233	11.233	36.847

Ekonomski tok projekta pokazuje ekonomske dobiti i ekonomske žrtve u životnom vijeku projekta, bez obzira na način na koji je finansiran i na temelju ekonomskog toka se ocjenjuje rentabilnost projekta i pomoću toga se mjeri direktan doprinos predmetnog ulaganja.

Pošto su vrijednosti neto primitaka ekonomskog toka prikazane dinamički u budućnosti, to je potrebno vrijednosti budućih neto primitaka svesti na vrijednost iz godine kada se vrši ulaganje, a pomenuto svođenje vrijednosti se vrši putem diskontne stope. Diskontna stopa se određuje kao prosječna ponderisana kamatna stopa koju izjednačavamo sa cijenom izvora finansiranja ili u ovom slučaju diskontnu stopu determiniramo kao realnu pozitivnu kamatnu stopu za komercijalni kredit iz kojeg bi se moglo finansirati kompletno ulaganje, a koja na domaćem finansijskom tržištu u prosjeku iznosi:

Diskontna stopa: **6,00%**

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Prema metodi perioda povrata investicionog ulaganja, ukupno uložena sredstva se **u potpunosti vraćaju u trećoj godini vijeka projekta, odnosno za 2,3 godine**, što je i logično imajući u vidu visoku likvidnost i akumulativnost predmetnog ulaganja.

Period povrata ulaganja (u 000 KM)

godina u vijeku projekta	Ukupno ulaganja		Iznos akumulacije		nepokriveni dio ulaganja
	godiš- nje	kumu- lativno	godiš- nje	kumu- lativno	
2019	0	20.060	6.249	6.249	-13.811
2020	1	0	9.373	15.622	-4.438
2021	2	0	10.643	26.266	6.205

Neto sadašnja vrijednost (NPV) pokazuje koliki je neto efekat projekta sveden na sadašnju vrijednost. Vrijednosti neto primitaka iz ekonomskog toka su svedene na sadašnju vrijednost primjenom diskontne stope od 6%. Diskontovanjem se dobija neto sadašnja vrijednost u iznosu od 70.736.000 KM. Obzirom da je NPV pozitivna to znači je po ovom kriteriju projekat prihvatljiv i izvodljiv. To takođe znači da se ovaj projekat isplati finansirati dugoročnim kreditom uz kamatnu stopu koja je jednaka diskontnoj stopi (6%) uz izuzetno visoku rentabilnost ovako koncipiranog ulaganja.

Neto sadašnja vrijednost (NPV)

(u 000 KM)

	2019.	2020.	2021.	2022.	2023.	2025.	2026.	2027.	2028.
NETO PRIMICI iz ekonomskog toka	-13.811	9.373	10.643	10.643	11.233	11.233	11.233	11.233	36.847
diskontna stopa 6,00%									
Neto sadašnja vrijednost NPV 70.736									

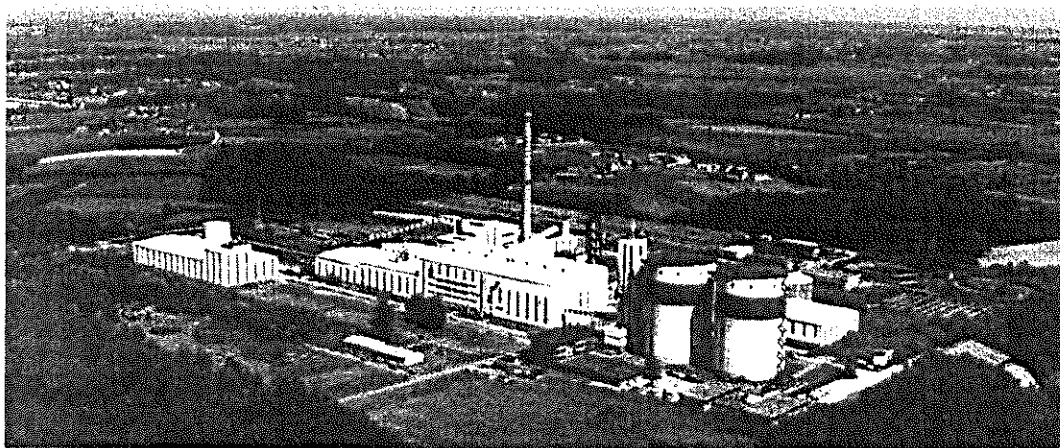
Primjenom metode interne stope rentabilnosti (IRR) utvrđuje se diskontna stopa koja sadašnju vrijednost neto primitaka ekonomskog toka projekta izjednačava sa nulom. IRR ovog projekta je izrazito visoka i iznosi 77,50 %, kao posljedica visoke likvidnosti i profitabilnosti ovako koncipiranog projekta.

Interna stopa rentabilnosti predstavlja maksimalno prihvatljivu kamatnu stopu po kojoj bi se mogao finansirati ovaj projekat (ako je cijeli finansiran iz kredita).

Takođe IRR predstavlja i stopu prinosa koju donosi kapital uloženi u ovako koncipiran projekat (ili se može interpretirati kao iprosječno godišnje ukamaćivanje investicionog ulaganja).

Budući da je IRR daleko iznad prosječne kamatne stope na kredite to je i po ovom kriterijumu ocjene **ovaj projekat preporučeno prihvatljiv i izvediv.**

PRE-INVESTMENT STUDY
"SUGAR FACTORY BIJELJINA" joint-stock company,
Velika Obarska - in bankruptcy



Bijeljina, 19.03.2018.

Pre-investment study of "SUGAR FACTORY BIJELJINA" joint-stock company

1

Pre-investment study of "SUGAR FACTORY BIJELJINA" joint-stock company

This pre-investment study was made on the basis of the Decision of the Board of Creditors held on the 8th of February, at "Sugar Factory Bijeljina" joint-stock company, which is in a bankruptcy, with the aim of offering a notion to potential strategic partners (buyers) about the possible revitalization of the factory, the possibilities of its future work and profitability of sugar production. According to the Decision, the leading designers are HAVREX Ltd Banja Luka, Mr. Rade Rakic BSc Technology, Mr. Slobodan Rakic, B.Sc. El.Engineering and Mr. Fafulic Meho BSc Technology.

The pre-investment study has been done in the period February-March 2018, by the expert team, consisting of:

- Pavlovic Zoran, BSc Economics, HAVREX doo, - Team Leader, Banja Luka
- Zeljko Bogdanic, BSc Economics, HAVREX doo, Banja Luka
- Rakic Rade, BSc Technical Engineering
- Fafulic Mirko, BSc Technical Engineering
- Rakic Slobodan, BSc Technical Engineering
- Nikolic Vojislav, BSc Electrical Engineering
- Faik Muhic, BSc Law

Note:

Part of the team, who made the technical part of the Pre-Investment Study, namely Rakić Rade, Fafulic Mirko, Rakic Slobodan and Nikolic Vojislav, has full authority and credibility, because they worked as managers in the factory before the war, as well as managers who carried out the overhaul and preparation of the Sugar Factory plant A.D. Bijeljina for the performed production in the 2010 campaign, in which they managed to get the final product - sugar.

By performing the works, they simultaneously recorded and registered all the shortcomings for the Sugar Factory's full readiness, so it would be ready to work with 100% of the projected capacity. That's why they were tasked with making technical part of this Study, so that all potential partners can get acquainted with the necessary technical and commercial conditions to be met in order to restore production in Sugar Factory A.D. Bijeljina.

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1. Brief history of "Sugar factory Bijeljina" joint-stock company

Sugar factory Bijeljina was built and put into operation in 1979, based on the concept of the company "Polmex-checop" from Poland. The projected capacity of the factory is 4000 t /day of sugar beet processing. During the first years of production, factory could not achieve the projected capacity, so partial removal of bottlenecks started.

Reconstruction has been completed in 1990. Work in full projected capacity happened for the first time during the Campaign in 1991. After a successful campaign, the war started on the territory of Bosnia and Herzegovina, but even during the war in 1992, a campaign was successfully completed.

From 1993, until 2007 the factory did not work, but all the plants have been preserved and protected. The factory stopped working and got closed without debts to suppliers and creditors. In the meantime, workers (who were not dismissed) took over the obligation of protecting the factory without payment of wages.

During bankruptcy proceedings in 2009, the factory has been restarted by the owner, company "Agrokop" Export-import doo Banja Luka, with the aim of restoring production.

Strategic partner hired key managers and workers of the sugar factory to restart the production, as well as specialized construction, machine and electrical companies for the repair of equipment and facilities. The planned goal of the strategic partner was to start the plant in order to produce sugar and other by-products.

Factory started working in 2010 with available funds invested in repairs. During the trial production campaign, a smaller quantity of sugar beet has been processed (around 20,000 tons) and sugar was obtained. In this way, the goal of the strategic partner has been achieved.

In order to start the factory in full capacity, in January 2011, factory's expert team has begun to develop plans for capital overhaul:

- plans for reconstruction and first degree of modernization in the field of electric power plants
- automation of the technological process.
- installation of new filtration equipment and pumps for the transport of juices and sugar beet pulp,
- modernization of the processing laboratory and reception laboratory and
- procurement of the necessary mechanization in the internal transport department.

All expert analyzes have shown that the above-mentioned capital overhaul activities can be achieved with an investment of about 20.060.336 KM (Chapter 7: Recapitalization of total investment).

The factory's capacities are in solid condition, with preserved production unit and plants, with available human resources - key expert team, previous managers, and with sufficient number of

workers and available agricultural land in the range of 100 kilometers around the factory itself, sufficient to start production in the short term.

1.1.General characteristics of the factory

Sugar factory - Bijeljina was built in 1979. The projected processing capacity is 4,000 tons of sugar beet per day. The planned annual processing during the production campaign is 400,000 tons of sweet root. Factory has been reconstructed in 1990 and 1991. and it has produced about 55,000 tons of sugar in the production campaign, which is maximum capacity achieved.

The factory covers about 50 hectares, which are owned by the factory. Ecological treatment of used water is done in lagoons, precursors. On an area of approx. 30 hectares, an administrative building was built, the main production hall with all accompanying facilities and belonging warehouses as well as dump sites for raw materials.

Factory is completely supplied with fresh water from its own wells - 3 wells of 300m³ each. On the remaining 20 hectares, lagoons were built for the reception of all wastewaters with a purification system, so that it meets ecological criteria.

It owns its own 96 MW power plant which has

- two boilers of 50 tons working on coal from the local mine,
- two boilers of 4.5 tons working on oil,
- turbine and generator of 8 MW.

Electricity from electrical grid will be used only until the factory starts its own production, and after that, surplus of electricity produced will be possible to sell to the grid, on the basis of a contract with the Electro-distribution company.

With projected capacity of 4,000 t/day, sugar beet processing produces:

- app. 550 to 560 tons/day of sugar,
- 250 t/day of briquettes-dry noodles and
- 170 t/day molasses.

For the storage of produced sugar, there are two concrete silo with the total capacity of 40,000 tons. Packaging of sugar is carried out in a factory, equipped with:

- two semi-automatic machines for packing sugar in 50kg valve-bags, and
- Heeser type automatic machine for packaging one and two kilograms of sugar.

It also owns a line for the production of sugar in the shape of cubes, which is a traditional product in Bosnia and Herzegovina. Capacity of the production line for sugar in cubes is 23 t/day. Area for storing received sugar is approx. 2,000 m² with storage capacity of 8,000 t of packaged product in warehouses.

The molasses warehouse has a capacity of 14,000 tons. The storage room for the briquetted noodle has a surface of 3000 m², with a processing capacity of 20,000 t of packed briquettes. In

its circle there is a petrol pump and warehouse for lubricants and other chemicals. It also has a spare parts storage with a useful area of approximately 500 m².

Reception landfills and warehouses in the factory have:

- for a fresh beet, capacity of approximately 15,000 tons,
- coal 20,000 tons,
- stone limestone 10,000 tons
- petcock 2,000 tons
- Mazut storage 3,500 tons

The main administrative building has an office space of 400 m², a restaurant of 500 m² and an ambulance of 40 m². All the above facilities must be renovated.

The factory also has supporting facilities:

- Machine workshop with equipment for maintenance and production of spare parts for complete maintenance of mechanical and technological equipment,
- electro workshop and
- a mechanical workshop for the maintenance of its own construction and agricultural machinery.

The factory's own laboratory with its workers is able to control all input raw materials and chemicals as well as all stages of production in the technological process and finished products.

Sugar factory, in addition to the processing of sugar beets, can also perform

- refining of raw cane sugar (smaller reconstruction needed, for which there are projects) in the capacity of approximately 450 t / day of white crystalline sugar outside the campaign period.

For its production, the factory has until 1992, employed about 450 workers, and in the sugar beet season another 500 seasonal workers.

On the basis of production experiences, during the campaign of full capacity, the plant processes: 400,000 t of sugar beet and produces:

- 55 to 56,000 tons of sugar
- 17,000 tons of molasses
- 25,000 tons of briquetted noodles

and for this it spends:

- 40,000 tons of coal,
- 20,000t stone limestone,
- 2,000 tons of petcoke,
- 1,200,000 natron bags of 50 kg,
- 40t of lubricants,
- About 10,000t of mazut.

Pre-investment study of "SUGAR FACTORY BIJEJINA" joint-stock company

During the campaign, the factory hires more than 200 hauliers with their trucks, which are available locally for a period of 100 days of work, the same period as the duration of the sugar beet campaign.

Sugar factory has additional products during the production - molasses and noodles - which are easily marketable.

To statistical data, Bosnia and Herzegovina annually consumes around 150,000 tons of sugar. It must be emphasized in particular that the sugar produced in the sugar factory is a domestic product, produced from sugar beet grown on the fields of Semberija and Posavina.

In B&H, after the war, a refinery for the finishing production of raw sugar cane was erected in Breko.

An analysis of the needs of the market in the environment of 400-800 km from Bijeljina showed that about 1.5 million tons of sugar is missing (Hungary, Romania, Italy, Bulgaria, Macedonia, Montenegro, Slovenia).

Currently, the price of sugar on the European market ranges between 450 and 550 euros per tonne, which is a very good reason for any serious investor, to pay the creditors and take over the factory and start production.

2. Presentation of the current financial situation of the "Sugar Factory Bijeljina"

As the Factory is in the bankruptcy process, a potential strategic partner / buyer can become a majority owner (67.98%) by paying off the claims of bankruptcy creditors totaling 16,262 thousand KM.

OWNERSHIP STRUCTURE (before proclaiming bankruptcy)

	Owners	Ammount in KM	% of ownership
1.	Shareholders' fund RS Banja Luka	14.690.121,45	61,41
2.	Agrocoop exp./imp. Banja Luka	6.221.951,78	26,01
3.	Small shareholders (1362)	947.286,78	3,96
4.	PRIF a.d. Banja Luka	808.542,75	3,38
5.	ZIF Kristal Invest Banja Luka	418.624,21	1,75
6.	Fund for restitution	404.271,38	1,69
7.	ZIF Invest Nova Banja Luka	392.310,69	1,64
8.	Zepter fund Banja Luka	38.274,21	0,16
	TOTAL ESTIMATED ASSET VALUE	23.921.383,25	100,00

Pre-investment study of "SUGAR FACTORY BIJEIJINA" joint-stock company

OWNERSHIP STRUCTURE with total amount of recognized claims (after the bankruptcy was proclaimed)

	Owners	Amount in KM	% of ownership
1.	Creditors (Recognized claims)	16.261.961,53	67,98
2.	The remainder of the equity capital	7.659.421,72	32,02
	TOTAL	23.921.383,25	100,00

* Analytical review of the current structure of recognized claims in the ownership structure

	Owners	Amount in KM	% of ownership
1.1	Secured creditors	1.457.336,36	6,09
1.2	Workers – General payment rank	6.607.337,92	27,62
1.3	Other creditors – General payment rank	8.197.287,25	34,27
	Creditors (recognized claims)	16.261.961,53	67,98
2.1	Shareholders' fund RS Banja Luka	4.703.650,88	19,66
2.2	Agrocoop exp.-imp. B. Luka	1.992.215,59	8,33
2.3	Small shareholders (1362)	303.313,10	1,27
2.4	PREF a.d. B. Luka	258.888,45	1,08
2.5	ZIF Kristal invest B. Luka	134.039,88	0,56
2.6	Fund for restitution	129.444,23	0,54
2.7	ZIF Invest Nova B. Luka	125.614,52	0,53
2.8	Zepter fund B. Luka	12.255,07	0,05
	Remaining equity	7.659.421,72	32,02
	Total estimated asset value	23.921.383,25	100,00
**	Disputed claims	15.458.401,00	-

** These claims are in the status of a court suit because they are not recognized by the Bankruptcy Administrator, thus obligations for these disputes are not probable, and the largest part in the amount of cca 12.572.000 KM refers to the contentious (ungrounded) claim.

Structure of fixed assets according to book value (in KM):

	Description	31.12.'13.	31.12.'14.	31.12.'16.	31.12.'17.
1.	Real estate, plants, equipment & investments, real estate				
1.1	Land	1.749.542	1.749.542	1.749.542	1.749.542
1.2	Construction facilities	15.489.304	14.718.892	14.431.741	14.288.811
1.3	Plants and equipment	9.412.758	8.581.544	7.341.925	6.548.937
1.4	Advances & invest. real estate	0	0	111	111
	TOTAL	26.651.604	25.049.978	23.523.318	22.587.401

Note: More details can be found in the financial statements shown on the Banja Luka Stock Exchange website, since Sugar Factory as a joint-stock company is obliged to publish them in this way, and all asset transactions take place through the Stock Exchange (link:

<https://www.blberza.com/Pages/issuerannouncements.aspx?&code=FSBN-R-A>)

Pre-investment study of "SUGAR FACTORY BIJE LJINA" joint-stock company

3. Estimation of the market position

3.1. Data on sugar production and consumption in the world, Europe and Bosnia and Herzegovina

According to the World Food Organization (WFO), which operates within the UN, the largest sugar producers in the world and in Europe are:

* The 10 largest sugar producers in the world

	Country	Production – millions of tonnes
1	Brazil	24,8
2	India	22,1
3	China	11,1
4	USA	8,0
5	Thailand	7,3
6	Australia	5,4
7	Mexico	4,9
8	France	4,4
9	Germany	4,2
10	Pakistan	4

The largest sugar producers in Europe

	Country	Production – millions of tonnes
1	France	4,4
2	Germany	4,2
3	Poland	2,0
4	Great Britain	1,2
5	Spain	1,2
6	Denmark	0,9

Total sugar production in the world is about 175 million tons, of which about 80% of sugar is produced from sugar cane, and 20% from sugar beet.

The average consumption of sugar in the world is 21.4 kg per capita. In developed countries the average annual consumption is 35-40 kg of sugar per capita, while in underdeveloped countries consumption of sugar is reduced to 5-10 kg per capita. There is growing consumption of various sweeteners around the world today, among which sugar is represented by 80%.

Based on detailed market situation analysis, the WFO estimates that by 2020, production of sugar will rise by 30 million tons, from the current 175 million. These estimates are made on the basis of population growth trend, the growth of economies and the industry of the most

Pre-investment study of "SUGAR FACTORY BIJE LJINA" joint-stock company

populated countries. According to statistics, about 10% of the world's sugar is produced in Europe.

According to known facts, it is very likely that EU producers will increase production and sales to the world market, because Brazil is limited by resources and there is no possibility to increase production, while India, which is the second largest producer in the world, has a rather obsolete technology and ramshackled factories.

WFO forecasts that world production will increase to about 257 million tons in 2030, and 300-350 million tons of sugar by 2050.

In the near environment, sugar production is as follows:

3.2. Production of sugar in the environment

	COUNTRY	Production in millions of tons	Notes
1	Serbia	0.55	Active factories: Pečinci, Kovačica, Vrbas, Senta, Žabalj, Crvenka Closed factories: Belgrade, Kovin, Požarevac, Čuprija, Peć, Bač, Zrenjanin, Šabac, Nova Crnja, Sremska Mitrovica
2	Croatia	0.35	Active factories: Virovitica, Osjek, Županja Closed factories: Beli Manastir
3	Bosnia & Herzegovina	0.13	Active factories: Breko (imports raw cane sugar and performs finishing-refining) Bijeljina is potentially in working condition, but does not work and is the only producing sugar factory in Bosnia and Herzegovina
4	Slovenia	-	Closed factory: Ormož
5	Macedonia	-	Closed factory: Bitola
6	Montenegro	-	No production of sugar

After the war, a refinery was launched for the finishing processing stages of raw cane sugar in Brčko and production in Bijeljina Sugar Factory started in 2010.

Based on the data of institutions that monitor the sugar market in the world and Europe, for the past three years there was a trend of sugar price increase, and with small variations in the price of sugar on world markets, it reaches a level of \$330 per ton, while on the European market it keeps the level between 450 and 550 euros per ton.

By analyzing the market, on the territory of Bosnia and Herzegovina, the placement of finished products should be guaranteed in full, as production with the full capacity of the factory (up to 60,000 tons of sugar) represents approximately 30% of the total needs of Bosnia and Herzegovina.

According to statistics, B&H uses about 160.000 tons of sugar annually. It has to be emphasized in particular that the produced sugar in Sugar Factory Bijeljina would be a domestic product made from sugar beet produced on the fields of Semberija and Posavina.

Molasses can also be fully marketed on the B&H market, and at competitive prices (which exceed production costs) can be fully exported to the surrounding countries. Ensiled or dried unsweetened noodles can be fully exported or fully placed on the domestic market.

3.3.Placement of finished products from production

Production of sugar beet

The Semberija area has more than 38.000ha of arable land that is suitable for production of sugar beet, and we can safely expect sowing on surface of min. 4.000ha in Semberija.

With good organization and good business relationship with beet producers and good and quality work on the terrain, it is possible to perform quality sowing on the following areas in around 100 kilometers:

1. 3.000-6.000 ha in the area of Semberija
2. 1.000-2.000 ha in the area of Posavina
3. 2.000 ha in the area of Macva and Srem, which is sufficient for the planned capacity of the factory.

The factory has so far had the following range of finished products:

- crystal white sugar packed in 1, 2 and 50 kg
- dried and briquetted noodle packed in 40 kg
- molasses (delivery with auto-tanks)

Considering the fact that the previous offer of the basic finished product was very modest, in order to increase competitive ability in the market, there is the need for the extension to small and decorative packagings:

- on retail packages of 5-10 and 25 kg of sugar,
- so-called "Jumbo sacks" of 1.000 kg,
- horeca packages of 5-10 grams.

Let's also mention that there is a market place for liquid sugars, so during the reconstruction the line for the production of liquid sugars should be made functional.

The sugar factory during production has by-products, molasses and noodles, which are highly appreciated in the world as a raw material from which products are made, they reach multiple selling price in the market relative to cost price.

3.4. Use of by-products and refining of sugar cane

The additional activity of the factory in the periods between the two campaigns is the possibility of sugar production from raw cane sugar. Investment is required for the stated. Securing the required quantities of raw cane sugar as an alternative raw material in the part of production is not a problem with regard to quantities available on the market (import) and the existing purchase price.

Possibilities for increasing the factory's income would be in the production of alcohol. Additional investment in equipment that would be installed in an existing hall for processing molasses into alcohol and livestock yeast would provide significant revenues.

Calculation shows that from 1 ton of molasses you get 500-550 liters of 96% alcohol which is an interesting product on the market. The current price of alcohol on the B&H market is about 2.50 KM/L.

Sugar factory as an additional by-product has unsweetened noodles that can always be sold like forage (animal feed). We suggest that the unsweetened noodle is dried, if the price of energy (eg fuel oil) is acceptable. Alternatively, if the price of the fuel is unfavorable, silage of the noodles can be done within the factory.

Silage would be marketed as animal feed in the Semberija area. The factory has the ability to produce very high quality silage, with very low production costs.

Third by-product is a very interesting saturated sludge, which would be adjusted, in order to obtain saturated fertilizer, which is very useful for soil calcification on the territory of Semberija and Posavina where the land is predominantly acidic. Saturated fertilizer is extremely useful to add to arable land, orchards, gardens.

Saturated fertilizer increases yield on acidic soils up to 40%, depending on the cultivated culture.

The factory is able to produce up to 30,000 tons of saturated fertilizer. Please note that the saturated fertilizer increases the biological and physical properties of the soil. It also accelerates the drying of the land after the big rainfalls, and controls moisture in the dry season.

The income from saturated fertilizers could reach up to 4,000,000 KM. In the area of Semberija, on more than 70% of the land 3-4 tons/Ha should be thrown per year. From this it can be concluded that in the next 10 years, market would be guaranteed.

Saturated fertilizer could be especially used as an additional stimulant to sugar beet producers, which would be detailed in the conditions of takeover, during contracting.

With the introduction of new products and the expansion of the range of production, the factory would be perform processing for approximately 300 day (in the form of extended campaign), the engaged labor force would be equally used throughout the year, and the factory would, on the

basis of this, realize added gross income at the annual level of about 30.000.000 KM (according to framework budgets).

The general conclusion is that for the complete production of the factory, there is enough market space, that is, the placement of goods is fully secured on the market of B&H and Europe.

4. Technical-technological condition and necessary investments in phases and production lines

4.1. Capital overhaul, reconstruction, rehabilitation of facilities and procurement

This Pre-investment study includes a list of necessary works on

- production equipment, works
- on the rehabilitation of the pipe network,
- construction works on buildings,
- modernization of production,
- renovation of the restaurant,
- purchase of new and used equipment for production,
- procurement of new equipment for the laboratory,
- procurement of used machinery for the purpose of serving the production,
- partial anticorrosion protection,
- procurement of office furniture and office equipment.

The repair can be performed by the workers of the Production and Technical Sector, who were previously employed in the factory, with engagement of third parties on specific tasks of Electric Power Engineering, Measurement Regulatory Techniques, Automation, Thermo-energetics and construction works (roof repair, facades, carpentry, etc.).

For the production realized in the 2010 campaign, activities on interventional rehabilitation were carried out on production facilities with the aim of starting production. During these activities that were realized in the factory, the following has been examined:

- state of the technological process
- state of electro-energy facilities
- the state of measurement-regulation techniques (which must be innovated)
- the state of automation (which must be innovated and/or completely replaced)
- state of thermos-energetics
- the construction condition of the facilities of the factory necessary for capital overhaul, which is designed and an integral part of the Study.

On the basis of realized production, capital overhaul must be done on the following technological units:

1. Line for reception and storage of sugar beets

Pre-investment study of "SUGAR FACTORY BIJE LJINA" joint-stock company

2. Line for washing and transport of beets
3. Line for cutting and production of raw juice
4. Line for drying and briquetting of noodles
5. Line for cleaning and production of rare juice
6. The line for production of thick juice
7. Refinery
8. Production of lime, Ca(OH)_2 and CO_2 -gas.
9. Energy facility and chemical preparation of water
10. Water supply and wastewater treatment system
11. Reception and processing laboratory
12. Electro-energy and Measuring-regulation technique
13. Storage line, sugar packaging
14. Work unit for transport and mechanization
15. Restaurant for workers

4.2.Reconstruction, purchase of new and used equipment, construction rehabilitation

The plan envisages the replacement of devastated and non-functional equipment in production by purchasing a new or adequately used equipment, which will technically be fully operational.

The following equipment must be restored to start production:

1. Purchase of 6 new centrifugal pumps for the transport of raw and light juice.
2. Purchase two new automatic presses instead of vacuum filters.
3. Purchasing of one new DDS filter-thickener on 1-filtration
4. Procurement of 6 gear pumps for refinery
5. Purchase of one new or used electric pump for a power plant
6. Reconstruction on the vacuum line
7. Reconstruction of MRT and Automatics (project made in 2011)
8. Reconstruction - adjustment for the processing of sugar cane (project made in 1997)
9. Reconstruction of the PP network.
10. Procurement of new laboratory equipment
11. Purchase of new and used agricultural and construction machinery, as well as transport fleet
12. Procurement of restaurant equipments with a capacity of 400 meals
13. Procurement of office furniture
14. Procurement of biotechnical equipment
15. Repair of roofs - facade on buildings
16. Rehabilitation of the pipeline underground network

Through this process of preparation and trial production at the factory, records were made about the needs in all segments of the production process, and the drafting of framework case and calculations for capital overhaul whose complete information is given below.

4.3. Projected investments

Funds for Capital overhaul, reconstruction, modernization, construction works, procurement of equipment are estimated in this Study in the following way:

RECAPITULATION OF COSTS

1. LINE FOR RECEIPT, STORAGE, TRANSPORTATION AND WASHING OF BEETS	86.900 KM
2. CUTTING, EXTRACTION, DRYING AND BRIQUETTING OF NOODLES	158.900 KM
3. LINE FOR THE PRODUCTION OF LIME AND CO2 GASES	98.800 KM
4. CLEANING AND FILTRATION LINES	2.351.600 KM
5. LINE FOR EVAPORATION AND PRODUCTION OF THICK JUICES	67.000 KM
6. REFINERY	142.000 KM
7. LINE FOR DRYING, STORAGE AND PACKAGING OF SUGAR	85.900 KM
8. WATER SUPPLY AND WASTE WATER TREATMENT SYSTEM	1.286.000 KM
9. LINE FOR DRYING AND BRIQUETTING OF NOODLES	5.000 KM
10. ACCOMMODATION AND PROCESS LABORATORY	350.000 KM
11. ENERGY FACILITY.....	1.500.000 KM
12. REPAIR OF EL-ENERGETICS, MECHANOREGULATION TECHNIQUES & AUTOMATICS	6.000.000 KM
13. RECONSTRUCTION OF THE FACTORY FOR THE PROCESSING OF RAW CANE SUGAR	400.000 KM
14. PROCUREMENT OF THE TOOLS FOR THE TECHNICAL SECTOR	80.000 KM
15. ANTICORROSIONAL PROTECTION	700.000 KM
16. FIXING UP THE FACTORY YARD AND REPAIR OF THE FENCE	60.000 KM
17. RECONSTRUCTION OF FACADES AND ROOFS	800.000 KM
18. PURCHASE OF MECHANIZATION	850.000 KM
19. REPAIR OF THE RESTAURANT	80.000 KM
20. REPAIR OF THE ADMINISTRATIVE BUILDING OFFICE	60.000 KM
TOTAL:	15,162,100 KM

4.4 Dynamic plan of estimated required investments for capital overhaul

Date	Amount in KM	Planned works
Phase I T+ 7 days	2,000.000	☐ Development of detailed plans, projects, tenders ☐ Restoration of the restaurant and equipment procurement ☐ Purchasing tools
Phase II T+ 15 days	1,000.000	☐ Procurement of mechanization ☐ Procurement of spendable materials ☐ Procurement of office furniture
Phase III T+ 30 days	3,000.000	☐ The beginning of the repair of the machine-technological equipment ☐ Introduction of third-party repair companies ☐ Opening of the site ☐ Procurement of el. cables and installation ☐ Start ☐ Commencement of energy overhaul and MRT ☐ Procurement of spare parts by priority ☐ The beginning of the renovation of roofs and facades ☐ The beginning of works on the rehabilitation of the pipe network ☐ Concrete rehabilitation of the pool and protection ☐ Start of works on AKZ

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		☐ Begin cleaning of the sedimentary deposits ☐ Payment of advances and invoices for executed procurement and works
Phase IV T+ 45 days	4,000.000	☐ Orders of equipment whose delivery time is long, and by adopted procurement plan ☐ Payment of realized situations
Phase V T+ 60 days	4,000.000	☐ Continuation of capital overhaul financing ☐ ...
Phase VI T+7 months	1,162.100	☐ Final payment of capital overhaul ☐ ...

***NOTE:**

1. In order to do a quality capital repair according to the above plan, the buyer / investor must provide 15.162.100KM. according to the proposed schedule.
2. In order to prepare the plant well for the processing of sugar beet in 2019, it is necessary to do the following:
 - That the investor forms management structure in the factory immediately after the factory has been taken over.
 - Employ the first group of workers no later than 15.08.2018. , whose task would be to provide conditions for the opening of the construction site (prepare the plans and technical documentation, capacitate handy workshops, provide security equipment, provide manual and special tools, procurement of machinery, forming workers' restaurant, fixing up factory yard, forming factory security, draft normative acts for necessary legal-economic operations, etc.)
 - To adopt plans for overhaul and term plans for labor recruitment no later than 25.08.2018., as well as term plan for the introduction of specialized firms to overhaul.

****NOTE:** An electronic version of all the data required for the Factory overhaul is available to potential customers.

5. Human resources

5.1 Management of Sugar Factory Bijeljina a.d.

Key long-term managers of the sugar factory are still available for engagement and cooperation today and for start of production at the factory. The following former managers are available to this team today:

1. Rakić Rade, BSc.tech. engineer - technical and commercial manager
2. Fafulić Mirko, BSc.tech.engineer. - technical and commercial manager
3. Rakić Slobodan, B.Sc., Process Manager, Zrenjanin
4. Nikolić Vojislav, BSc.tech.engineer - company Energo System, Brčko - electro sector
5. Faik Muhić, lawyer - owner of the law firm Muhić, Tuzla - legal sector
6. Havrex Ltd. consulting company as supporting implementation company.

The above-mentioned team of experts made this Pre-Investment Study and biographies of all the above-mentioned managers are available to potential buyers.

5.2 Manpower

When the factory was in operation and production phases, before the war, it employed 450 permanent workers and about 500 seasonal workers.

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In the case of planned modernization of parts of the factory, it is planned to have 200 permanent employees and 200 seasonal workers.

For newly-employed workers, a training program for the operations and use of installed equipment should be foreseen, and for that the above management team can be engaged.

6. The raw material base

6.1. Production of sugar beet in the Semberija area - history

The sugar factory has been operating since 1979 and has stopped working in 1993, due to the war in Bosnia and Herzegovina.

By re-launching the factory in 2010, the plant management, PD "Semberija", PZ "Agrosemerija", a number of cooperatives and individual producers began to work on reviving the production of sugar beet at these areas. Since the factory was stopped again, the activities on the expansion of production have stopped.

Semberija, which extends between two large rivers Sava and Drina, is an ideal area for the production of sugar beet, as water participates 75% in the yield. Water for the irrigation of arable land is located in sufficient quantity already at a depth of about 5 m.

Semberija has 38.000 ha of land that is suitable for the production of sugar beet, which enables production for the work of the factory with projected capacity with respect to the four-year crop rotation.

Semberija is affected by a moderate continental climate. The highest rainfall is in May and June, and the least in March and September. It is covered in snow up to 40 days (December-March). Winters are mild with average temp. of 2°C. Relative humidity is 70-80%. The number of sunny days varies from 75-100 days. Temperature in June, July, August and September ranges from 15-37°C. The average annual temperature is 10°C.

Semberija soil is of good quality, predominantly widespread is fertile black humus, wetland humus and river deposits. The larger arable land is suitable for growing sugar beets.

In the area of Semberija and Posavina sowing is done in the period from March 25 to April 20, on the prepared plots. Preparation of the sowing plot implies plowing, deep plowing, plating and spreading of fertilizers NPK 8-16-24 in the amount of 200 kg / ha. Before sowing, fertilization is carried out with NPK 15-15-15 at quantity of 400 kg / ha and KAN, AN in the amount of 200 kg / ha. The producers of used fertilizers are: Pančevo, Subotica (Serbia) and Kutina (Croatia).

If the autumn preparations are properly carried out and rough handling of the plot, pre-sow processing of the soil and quality protection from pests (cerkosporas, CSFB, stem weevils,

aphids) the yield must be good. With quality preparation, yield in Semberia was about 45 to 55 T/ha.

Protective agents (insecticides, herbicides) were used from the maker BASF - Germany. In practice, these fertilizers are given as an advance. In the course of sowing, spraying agent against weeds is also given as an advance. Funds for other sprayings were given out for free, because domestic producers do not have enough funds, and in this way better cooperation has been achieved.

Mostly, the KWS seed of the new generation was used. Seeding with planned crop rotation every four years on the same plot has been carried out according to the planned production before 1993. The required amount of seed is around 1.2 SJ/ha. Sowing is done by pneumatic seed sowing machines.

6.2. Serving the cultivation of sugar beet

Since in the territory of the Republic of Srpska households have smaller plots (on average 2ha), the number of growers, before the war, ranged from 3000 to 4500 with an average area of 0.8ha. Today, a substantial number of individual producers own plots of over 10ha.

Procurement contracting of sugar beets was done directly between factory and producers, very small amount through cooperatives.

The complete production of sugar beet was funded in advance by the factory with the free allocation of funds for spraying against pests. In order to improve the production of sugar beet, factory donated around 15% of the raw noodles to producers for the delivered beets.

Sugar factory relies only on road transport, which significantly increases production costs. It's necessary to continue activities on securing railway transport to the factory. There are no local factories which produce machinery for the production of sugar beet (sowing machines, combine harvesters and other agricultural machinery). Many of those factories were alienated or devastated in the war. The purchase of new mechanization is needed.

In order to ensure a good yield, and this will certainly be solved by irrigation, it is necessary to procure systems for irrigation. Currently in Semberija there is a small number of households that own equipment for irrigation. Currently, in the Republic of Srpska, the prices of other agricultural crops are not favorable for production in relation to sugar beet. Today, only vegetable production has an advantage over sugar beets. The advantage in the production of sugar beets in relation to vegetables is the secured purchase of complete production and guaranteed respect for the agreed price.

6.3. Quality control of sugar beet growing

Determination of sugar beet quality is done in the factory laboratory. Sugar beet quality (sugar content and % of impurities) is determined in a raw material laboratory, by taking at least one sample from each vehicle.

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OPINION:

The future investor/owner has a good perspective to provide enough sugar beet in the area of Semberija and Posavina, in order to cover full capacity of the factory.

Also, since sugar factories in Sabac and Sremska Mitrovica have been closed, this gives the chance to Bijeljina sugar factory to cover production and purchase of sugar beets from the indicated area. Macva region is especially interesting, because the distance from the Sugar Factory to the fields is 60 km.

6.4. Sugar beet production plan for 2019 campaign.

For the campaign in 2019, the production of approx. 300,000 tons of sugar beet can be planned at the area of Semberija and Posavina, Srem and Macva.

The Semberija area has more than 38,000 ha of arable land that is suitable for production of sugar beet, which is a basic requirement to safely expect sowing on a surface of min. 4,000 ha in Semberija alone.

With good organization, good business relationship with beet producers, good and quality work on the field, it is possible to perform quality sowing on the following areas:

	In 2019.	In 2020.
	Ha	Ha
Semberija	3000	4000-6000
Posavina	1000	1500-2000
Srem-Macva	2000	2000

In order to, with certainty, create an interest in planting this industrial culture by producers from Semberija and Posavina, the strategic partner / owner of the factory must be especially engaged in the field, and the support of the Government of Republika Srpska is also needed.

- With good organization, disciplined work in the field and quality incentive, the opinion is that it is possible to achieve sowing on cca 6000 Ha, which would enable one quality production in 2019.
To achieve the planned quantities of sugar beets it is necessary to provide contracts by the end of September 2018., in which the obligations of the sugar factory and sugar beet producers will be clearly defined.
- Because of the importance of sugar beet production and factory operation, we suggest sugar beets should be treated by the Government as a strategic product, as this is a significant capacity that can contribute increase of the gross social product of the Republic of Srpska.

- In accordance with the calendar for the production of sugar beets, all the producers should be timely provided with raw materials, complete expert supervision from land preparation, sowing to extraction and handing over to the factory. It is also important to create trust between the farmers and the factory, agreed payment time for the delivered sugar beet should be respected.
- Recommendation:
To request from the Government of the Republic of Srpska or the Ministry of Agriculture to include it in the incentives plan for the production of sugar beets, in order to stimulate agricultural producers for sowing in 2019. It is considered that the incentive must be related to kg of delivered beets, not to the land area seeded with beets. Our proposal to Republic of Srpska Government: Incentive should be 0,02 KM/kg of delivered clean beet to the factory in Bijeljina.

6.5. Planning the purchase price of sugar beet

For the production of sugar beet in 2019, in this pre-investment study, calculations were made according to the following conditions:

1. The purchase price of sugar beet would be 70 KM/t of pure beet, and on the basis of a digestion of 16%.
2. For greater or lesser digestion the price is calculated on the basis of the following table:

Digestion %	Up to 12.99	13.00	13.50	14.00	14.50	15.00	15.50	16.00	16.50	17.00	17.50	18.50
Price KM/t	54.69	56.88	58.80	61.25	63.43	65.62	67.81	70.00	72.19	74.38	78.56	78.75

3. Provide sugar beet seeds in advance (1.2 SJ/ha)
4. Provide an agent for protection against cercospora in advance
5. Provide an agent for protection against stem weevils in advance
6. Stimulation in the form of fertilizers/raw noodles of 10% on the delivered amount of pure beet.
7. Provide basic mineral fertilizer for NPK 15:15:15 in the amount of 600 kg/ha in advance
8. Provide mineral fertilizer KAN in the amount of 400 kg/ha in advance
9. It is necessary to ask the Government of RS to grant a subsidy to producers on diesel of 40l/ha
10. The Government of the Republic of Srpska should be asked to support the plant by encouraging producers of sugar beet

It is proposed that the final calculation be made within 5 days after the delivery of the sugar beet, and in accordance with the agreement. Payments according to calculation should be made within 30 days at the latest.

In order for the production plan to succeed, it is necessary to urgently approach the development of a plan for the procurement of the necessary raw materials, and start all the field activities. It is necessary to immediately, after the signing of the Contract with the farmer, deliver all materials (seeds, fertilizers, protection agents...)

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Land preparation, sowing and supervision during production, extraction and transfer to the factory should be carried out by regional instructors and the factory's department responsible for the production of sugar beets.

NOTE:

- The expected-planned yield is at least 45 t/ha.
- In 2019, contracting sugar beet farmers from Maeva and Srem region, should be planned, at an area of about 2,000 ha.
- Production of sugar beets should be planned in a diameter of up to 100 km from the factory.

7. Recapitulation of total investments for the start of production

	Recapitulation of total investment	In KM
1	Capital overhaul and modernization of plants	15,197,302
2	Other and unpredictable investments	1,823,670
3	Working capital	3,039,364
	TOTAL	20,060,336

On the basis of all of the previously mentioned elements of a pre-investment study, it can be considered that for start-up of production, estimated other and unforeseen investments, and working capital required to start work and organize sugar beet production with farmers, we estimate that it is necessary to provide an amount of **20,060,336KM**

8. Planned income from sale of the basic product - sugar and other products

8.1 Production plan

In the 2019 campaign, plan is to process at least 300,000 tons of sugar beet.

By processing 300,000t of sugar beet it is possible to produce:

1. Sugar from beet (13%)	39,000t
2. Molasses (4.5%)	13,500t
3. Dried Noodle (6.3%)	18,900t

8.2. Value of production

Value of production (realization)							
		2019	2020	2021	2022	prices	
1.	Sugar from beet	35,100,000	46,051,200	49,982,400	49,982,400	900	KM/t
2.	Sugar from cane	-	-	-	-	-	-
3.	Molasses	4,050,000	5,313,600	5,767,200	5,767,200	300	KM/t
4.	Dried noodle	6,615,000	8,678,880	9,419,760	9,419,760	350	KM/t
	TOTAL	45,765,000	60,043,680	65,169,360	65,169,360		

Note: * Prices are based on currently valid market prices in B&H.

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9. Dynamic projections for the production of sugar beet and the provision of basic raw materials and reproductive materials

Sugar beet production plan	2019		2020		2021		2022	
	ha	t	ha	t	ha	t	ha	t
Semberija	3,250	156,000	5,000	240,000	5,700	273,600	5,700	273,600
Posavina	1,000	48,000	1,200	57,600	1,200	57,600	1,200	57,600
Srem-Macva	2,000	96,000	2,000	96,000	2,000	96,000	2,000	96,000
TOTAL	6,250	300,000	8,200	393,600	8,900	427,200	8,900	427,200
*Yield in t/ha		48		48		48		48

Plan of providing raw materials										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
*Contracted production										
in Semberija and Posavina t	204,000	297,600	331,200	331,200	331,200	331,200	331,200	331,200	331,200	331,200
Procurement from other regions t	96,000	96,000	96,000	96,000	96,000	96,000	96,000	96,000	96,000	96,000
**Raw cane sugar t	-	-	-	-	-	-	-	-	-	-
TOTAL	300,000	393,600	427,200	427,200	427,200	427,200	427,200	427,200	427,200	427,200

10. Dynamic projection of sugar production to achieving full capacity

Plan of sugar production	2019	2020	2021	2022
Sugar from sugar beet t	39,000	51,168	55,536	55,536
Molasses t	13,500	17,712	19,224	19,224
Dried noodles t	18,900	24,797	26,914	26,914

11. Calculation of operating costs and other operating expenses

11.1. Material costs of raw materials and intermediate goods, labor and other operating expenses

- Projection of the expenditure of funds is based on planned norms for processing 300,000 tons of sugar beet, and current prices.

Plan of operating expenses	2019	2020	2021	2022	(prices)	normativ
						Per 1t of beet
1 Sugar beet	21.000.000	27.552.000	29.904.000	29.904.000	70	
2 Coal	3.750.000	4.920.000	5.340.000	5.340.000	125	0,100
3 Stone	198.000	259.776	281.952	281.952	12	0,0550
4 Petcoke	792.000	1.039.104	1.127.808	1.127.808	600	0,0044
5 Fuel oil (**for drying of noodles)	5.953.500	7.810.992	8.477.784	8.477.784	900	0,02205

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6	Firewood for furnaces and boilers	960	1.260	1.367	1.367	60	0,000053
7	Oils and lubricants	48.000	62.976	68.352	68.352	4.000	0,000040
8	Chemicals for production	60.000	78.720	85.440	85.440	600	0,00033
9	Chemicals for labs	10.000	13.120	14.240	14.240	10.000	
10	Diesel fuel for internal transport	82.000	107.584	116.768	116.768	2.050	0,000133
11	Gasoline 95	16.400	21.517	23.354	23.354	2.050	0,000027
12	Bags for sugar	256.000	335.872	364.544	364.544	0.32	2,667
13	Bags for noodles	160.000	209.920	227.840	227.840	0.32	1,667
14	Filter cloths	36.000	47.232	51.264	51.264	12.000	0,00001
15	Hygienic-technical protective equipment for (cca 400) workers	28.000	28.000	28.000	28.000	70	
16	Hot meals	289.000	289.000	289.000	289.000		
17	Wages for seasonal workers (gross) during campaign	537.900	537.900	537.900	537.900		
18	Wages for full-time employed workers (gross)	3.585.600	3.585.600	3.585.600	3.585.600		
19	Consumable office supplies	10.000	10.000	10.000	10.000		
20	Consumable hygiene supplies	5.000	5.000	5.000	5.000		
21	Transport of workers during campaign	31.680	31.680	31.680	31.680		
22	Transport of workers when there's no campaign	38.400	38.400	38.400	38.400		
23	Transp. services, insurance, freight forwarding, customs, taxes, registration	800.000	1.049.600	1.139.200	1.139.200	1	2,667
24	Electrical energy	500.000	500.000	500.000	500.000		
25	Daily allowance, field allowance	100.000	100.000	100.000	100.000		
26	Raw cane sugar	-	-	-	-	600	1,11
27	Other obligations per employee during campaign	500.000	500.000	500.000	500.000		
28	Accrued vacation pay	40.000	40.000	40.000	40.000		
	TOTAL	38.828.440	49.175.252	52.889.493	52.889.493		

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11.2. Depreciation calculation

	Depreciation						
	Fixed assets	2018	2019	2020	2021	2022	2028
1	Purchase value of assets	29.463.889	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225
2	Investment	20.060.336	0	0	0	0	-
3	(1+2)	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225	49.524.225
4	Annual depreciation	933.973	1.610.007	1.610.007	1.610.007	1.610.007	1.610.007
5	Net value of fixed assets	21.653.316	40.103.645	38.493.638	36.883.632	35.273.625	25.613.584

12. Financial effects of investment - dynamic projection

	PROFIT AND LOSS				
		2019	2020	2021	2022
1	Business income - realisation	45.765.000	60.043.680	65.169.360	65.169.360
2	Other income	45.000	45.000	45.000	45.000
3	Total income (1+2)	45.810.000	60.088.680	65.214.360	65.214.360
4	The main raw material	21.000.000	27.552.000	29.904.000	29.904.000
5	Energy products	11.094.860	14.400.456	15.587.081	15.587.081
6	Raw materials	367.000	476.824	516.248	516.248
7	Packaging	416.000	545.792	592.384	592.384
8	Material costs (4+5+6+7)	32.877.860	42.975.072	46.599.713	46.599.713
9	Costs of salaries and other pers. expenses	5.150.580	5.150.580	5.150.580	5.150.580
10	Dependent costs of procurement and services	800.000	1.049.600	1.139.200	1.139.200
11	Depreciation	1.610.007	1.610.007	1.610.007	1.610.007
12	Non-material costs and other expenditures	350.000	350.000	350.000	350.000
13	Financial expenses for loans	1.203.620	2.949.315	2.949.315	2.949.315
14	Total expenditures (8+9+10+11+12+13)	41.992.067	54.084.575	57.798.815	57.798.815
15	Gross profit (3-14)	3.817.933	6.004.105	7.415.545	7.415.545
16	Income tax 10%	381.793	600.411	741.555	741.555
17	NET PROFIT (15-16)	3.436.140	5.403.695	6.673.991	6.673.991

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13. Dynamic market-financial assessment of investments

In order to create a fair and realistic dynamic financial evaluation of this projected investment (observed as an investment), a hypothetical assumption is made that the investment in question will be financed with long-term commercial loan (which is usually the case with such investments), under conditions that are shown:

Loan			Amount in KM
Amount:	20.060.336	Annual interest in grace p.	1.203.620
Grace period:	1 year		
Repayment period:	10 years	annual annuity	2.949.315 KM
Annual interest rate:	6%		

Concerning the roadmap, investment in equipment constitutes majority of investment, hence we took in consideration equipments' presumed lifetime and functional usage. The deadline for repaying a potential loan for financing of such investment, is in accordance with the aforementioned, and it all together defines the economic life of the project (investment) and all dynamic projections have been done in accordance.

ROADMAP (Economic life of the project): 10 years

	Financial flow (in 000 of KM)									
		2019	2020	2021	2022	2023	2025	2026	2027	2028
1	Total income	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	65.214
2	Financial sources	20.060	0	0	0	0	0	0	0	0
3	The rest of the project value	-	-	-	-	-	-	-	-	25.614
4	Inflows	65.870	60.089	65.214	65.214	65.214	65.214	65.214	65.214	90.828
5	Investments	20.060	0	0	0	-	-	-	-	-
6	Material costs	32.878	42.975	46.600	46.600	46.600	46.600	46.600	46.600	46.600
7	Costs of salaries and other pers. expenses	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151
8	Other expenses	1.150	1.400	1.489	1.489	1.489	1.489	1.489	1.489	1.489
9	Financial expenses for loans	1.204	2.949	2.949	2.949	2.949	2.949	2.949	2.949	2.949
10	Liabilities for profit tax	382	1.190	1.331	1.331	742	742	742	742	742
11	Outflows	60.824	47.766	51.622	51.622	56.930	56.930	56.930	56.930	56.930
12	NET Inflows (4-11)	5.046	12.322	13.593	13.593	8.284	8.284	8.284	8.284	33.898

The financial evaluation of the investment primarily involves the assessment of liquidity. Liquidity of this kind of project implies its ability to settle all mature financial obligation at any time. Net inflows in the financial flow represent an increase in the financial potential (provided they are of positive size).

The liquidity of this project is estimated to be very favorable, since the net inflows in all years of the project's lifetime are positive or in other words the financial evaluation of such a project is **"a very liquid project"**.

	Financial flow (in 000 of KM)	2019	2020	2021	2022	2023	2025	2026	2027	2028
1	Total income	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	65.214
2	The rest of the project value	-	-	-	-	-	-	-	-	25.614
3	Inflows	45.810	60.089	65.214	65.214	65.214	65.214	65.214	65.214	90.828
4	Investments	20.060	0	0	0	-	-	-	-	-
5	Material costs	32.878	42.975	46.600	46.600	46.600	46.600	46.600	46.600	46.600
6	Costs of salaries and other pers. expenses	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151	5.151
7	Other expenses	1.150	1.400	1.489	1.489	1.489	1.489	1.489	1.489	1.489
8	Liabilities for profit tax	382	1.190	1.331	1.331	742	742	742	742	742
9	Outflows	59.621	50.716	54.571	54.571	53.981	53.981	53.981	53.981	53.981
10	NET Inflows (3-9)	- 13.811	9.373	10.643	10.643	11.233	11.233	11.233	11.233	36.847

The economic flow of the project shows economic benefits and economic sacrifices in the lifetime of the project, no matter the way in which it is financed, and based on the economic flow, the profitability of the project is evaluated and by doing so, the direct contribution of the investment concerned is measured. Since the values of net inflows of economic flow are shown dynamically in the future, it is necessary for values of future net inflows to be reduced to value from the year when the investment is made, and mentioned reduction of the value is done through a discount rate. The discount rate is determined as an average weighted interest rate which we equalize with the price of the funding source or in this case discount rate is determined as the real positive interest rate for the commercial loan from which a complete investment could be financed, which on the domestic financial market on average amounts to:

Discount rate	6.00%
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According to the method of the period of return on investment, the total funds invested are fully recovered in the third year of the project life, ie in 2,3 years, which is logical given the high liquidity and the accumulation of the investment in question.

Investment return period (in 000KM)						
	Year of project's life	Total investment		Amount of accumulation		Uncovered part of the investment
		Annual	Cumulatively	Annual	Cumulatively	
2019	0	20.060	20.060	6.249	6.249	-13.811
2020	1	0	20.060	9.373	15.622	-4.438
2021	2	0	20.060	10.643	26.266	6.205

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The Net Present Value (NPV) shows the net effect of the project being reduced to the present value. The values of net inflows from the economic flow are reduced to the present value using discounted rates of 6%. The net present value in the amount of 70.736.000KM is obtained by discounting. Since NPV is positive, this means that according to this criterion, the project is acceptable and feasible. It also means that this project is worth financing by a long-term loan with an interest rate equal to the discount rate (6%) with the exceptionally high profitability of thus conceived investment.

Net Present Value (NPV)									
in 000KM	2019	2020	2021	2022	2023	2025	2026	2027	2028
NET inflows from financ.flows	- 13.811	9.373	10.643	10.643	11.233	11.233	11.233	11.233	36.847
Discounted rate 6,00%									
Net Present Value (NPV)	70.736								

By applying the internal rate of return (IRR) method, the discount rate is determined, which is equaled with zero, by the present value of the net inflows of the economic flow of the project. The IRR of this project is remarkably high and amounts to 77.50% as a result of high liquidity and profitability of such a project.

The internal rate of profitability represents the maximum acceptable interest rate at which this project could be funded (if it is financed entirely from the loan).

IRR also represents the rate of return brought by the capital invested in such a project (or can be interpreted as the average annual blurring of the investment).

Since the IRR is far above the average interest rate on loans, by this criterion as well **this project is recommendable, acceptable and feasible.**

Internal rate of return (IRR)			
Discounted rate		Net Present Value in 000KM	
	6%		72.224
	25%		22.011
	40%		9.461
	75%		292
	77%		71
	77,50%		18
	77,67%		0

14. Conclusion:

- Sugar factory Bijeljina was built and put into operation in 1979. according to the concept of "Polmex checop" from Poland. The projected capacity of the factory is 4000 t/day of sugar beet processing. During campaigns in 1991 and 1992, the projected production capacity of 55,000 tons of sugar has been achieved. After the successful campaign, the war started on the territory of Bosnia and Herzegovina, but even during the war year - 1992, a campaign was successfully completed. From 1993 until 2007, the factory did not work, but all plants are preserved and protected. Trial production happened in the 2010 campaign.
- Due to the impossibility of settling tax liabilities, the Tax Administration of Republic of Srpska has launched the second bankruptcy over the Sugar Factory, on 16.12.2015, which is still in progress. During the bankruptcy procedure, the judge acknowledged claims from creditors, and **Sugar Factory Bijeljina today has the Bankruptcy Manager, the Assembly and the Creditors' Committee, but HAS NO OTHER LIABILITIES** and also has an active account in a commercial bank, but it still in the process of bankruptcy.
- **Potential strategic partner, by purchasing all recognized claims from creditors in the amount of 16,261,961.53KM, ie by payment of a certain amount of claims to creditors of bankruptcy debtor, will become the 100% owner of the bankruptcy debtor - Sugar Factory Bijeljina, and in legal terms will become the "legal successor" of all rights of the sugar factory without any further additional obligations.**
- In order to start the factory in full capacity, factory's expert team has developed plans for capital overhauls that are available and include:
 - plans for reconstruction in the field of electro
 - energy plants
 - automation of technological processes,
 - complete modernization of production management through computer systems
 - installation of new filtration equipment and pumps for the transport of juices and sugars.
 - modernization of the process and reception laboratory and
 - procurement of the necessary mechanization in the internal transportation department.
- All expert analyzes have shown that **for these capital overhaul tasks, an investment of around 20,060,336 KM must be planned.** The total invested funds will, according to the Study and method of return period of the investment, be **fully refunded in the third year of the project, i.e. in 2.3 years of production.**
- The liquidity of this project is estimated to be very favorable, as the net inflows in all years of the project life are positive or in other words a financial grade of such project is a **"highly liquid project".**

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- Since **IRR is far above the average interest rate on loans**, by this criterion as well, this project is recommended, acceptable and feasible.

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